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BEETLE JAY

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SCI/TECH

Front cover: Status of this dragonfly in Manitoba, see article by de March & Taylor on p. 51.

Larry de March

Back cover: Mystery Photo, see p. 48.

Joanne Marchand



Varied thrush (*Ixoreus naevius*). This rare visitor to the Prairies was photographed in Saskatoon, SK, during the 2010 Saskatchewan Christmas Bird Count. For results of the 2010 CBC, see article by A. Smith on p. 2.

Nick Saunders



Unusual western spiderwort (*Tradescantia occidentalis*) observed in July 2010 at Douglas Provincial Park, SK. This flower is anomalous for having four petals, rather than the typical three.

Jennifer Rumancik

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THIS ORGANIZATION RECEIVES FUNDING FROM:



BIRDS

69th ANNUAL SASKATCHEWAN CHRISTMAS BIRD COUNT-2010

Alan R. Smith

Box 154, Avonlea, SK, S0H 0C0

The Counts. The number of counts rebounded slightly over last year from 83 to 85. This was largely due to the efforts of Lorne Scott, who encouraged local observers to conduct new counts at Odessa and Sintaluta and revive a third at Qu'Appelle. Ryan and Laurent Dudragne also revived a count in Hazlet. This is the first time the locality has been covered since the winter of 1947-1948!

These gains were more than offset by the passing of Ronald Hooper who had compiled counts at Somme (since 1951) and Fort Qu'Appelle (since 1985). Many thanks to Alan Mlazgar for organizing and compiling the count at the latter location.

The Birds. The 2010-2011 Christmas Bird Count (CBC) was unremarkable. The 87,284 birds were the fewest tallied since 1996. Most of this decline is attributable to a marked decline in the number of overwintering waterfowl.

The number of species seen on count day (91) and over the count period (97) were about average. The locality with the most species has in recent years become a fait accompli: Saskatoon won for the ninth consecutive year with 46 species. The real competition is for runner-up: this year it was Regina with 38 species.

Population Trends. As in the past, there were 'winners' and 'losers'. A lack of prey, or more likely a lack of access due

to rain-crusted snow, resulted in a severe reduction in numbers of both snowy and short-eared owls.

The sharp-shinned hawk seems to be giving the merlin increasing competition as the small, bird-eating wintering raptor. This winter, sharp-shins were recorded on 7 counts compared to 15 for merlins. In the 1980s, sharp-shins were found on less than one count per year, and merlins on about 12 per year. Perhaps the increasing lushness of our cities, towns, and farmsteads is becoming more inviting to these more maneuverable raptors.

Bohemian waxwings rebounded nicely from a long-term low last winter to more normal numbers this year. Conversely, their smaller cousins, cedar waxwings, were nearly absent. Since most compilers reported a poor native fruit crop, there may have been intense interspecific competition for this limited food resource.

It's old news, but the Eurasian collared-dove continues to expand its range border - to border - to border with new CBC records for Whitewood near the Manitoba border, Coronach near the US border, and Estuary North near the Alberta border. Overall, it was present on a record 14 counts.

On the other hand, the population expansion of the other recent arrival, the house finch, seems to have leveled off

with only one new location (Churchbridge), and reporting localities and total numbers about average for the last decade.

New Species. No new species were added to the all-time list, which thus remains at 184 species.

Other Rarities. As usual, a few unusual species were present on the count. A red-bellied woodpecker on the Crooked River count and an eastern towhee on the Rouleau count were only the third of their kind on the CBC.

Count Areas and Participants (Names of compilers are in italics).

1. ARCHERWILL. Gerald Hiron, Susan Hiron, Bud Hnetka, *Elaine Hughes*, Dorothy Klettberg, Willie Klettberg, Judy Revoy, Rick Rhone.
2. AVONLEA. Randi Edmonds, Carol Sanderson, Ron Sanderson, *Alan Smith*, Blaine Sudom.
3. BANGOR. *Allan Bolton*, *Lynn Bolton*, Alan Hayward, Alleen Hayward, John Maddaford, Leslie Maddaford.
4. BIGGAR. Mark Pickett, Linda Schnedar, Lorrie Sielski, *Guy Wapple*, Marguerite Wapple, Rob Wapple, Sandra Wapple, Lacey Weekes.
5. BIRCH HILLS. Carman Dodge, Margaret Mareschal, *Maurice Mareschal*, Don Weidl.
6. BROADVIEW. Doug Boivin, Barbara Weidl, Don Weidl.
7. BROMHEAD. Martin Bailey, *Carol Bjorklund*.
8. CABRI. *Carman Dodge*.
9. CANDLE LAKE. Doug Boivin, Carman Dodge, Margaret Mareschal, Moe Mareschal, *Don Weidl*.
10. CATER. Bev Beland, *Orval Beland*.
11. CHRISTOPHER LAKE. *Jeannie Walker*.
12. CHURCHBRIDGE. Cas Chyz, Verna Chyz, Elin Johnson, Ron Johnson, Phyllis Kaeding, Martha Karau, *Wally Karau*, Ed Wirth, Gloria Wirth.
13. CLARK'S CROSSING. Carol Blenkin, Lucille Bradatsch, Dave Cook, Louise Cook, Lorne Duczek, Ryan Dudragne, May Haga, Marilyn Haskins, Ron Jensen, Robert Johanson, Heney Klypak, Gordon Koshinsky, Margaret Koshinsky, Mary Loewen, Audrey MacKenzie, Bill MacKenzie, Hilda Noton, Sylvia Raginski, Nick Saunders, Jan Shadick, Stan Shadick, Marten Stoffel, Barry Usselman, Guy Wapple, *Michael Williams*.
14. CODETTE LAKE. *Doug Boivin*, Carman Dodge, Barb Weidl, Don Weidl.
15. COLD LAKE-PIERCELAND. Thomas Knox, *J. Frank Roy*, Margaret Roy, Patrick Roy, Shelly Turner.
16. CORONACH. *Alan Smith*.
17. CRAVEN. Mary Aird, Anita Bergman, Charlie Bruce, Tina Campbell, Stephane Canevet, Blanche Cooper, Rob Cunningham, Karen Eliot, David Hall, *Trevor Herriot*, Louise Holloway, Phil Holloway, Bob Luterbach, Barbara Mader, Doug Mader, Lauren Mang, Kim Mann, Barry Mitschke, Valerie Mitschke, Kevin Moore, Curtis Pollock, Brett Quiring, Susan Rollins, Jeannetta Taylor, Robb Taylor, Mary Weber.
18. CREIGHTON. *Brenda Schmidt*, Harvey Schmidt.
19. CROOKED LAKE. *Boyd Metzler*, Pat Ward.
20. CROOKED RIVER. Helen Carson, Lyle Carson, Burnie Lewis, Joyce Lewis, *Margaret Mehler*, Morley Mehler.
21. CYPRESS HILLS PROVINCIAL PARK (Centre Block). David Larson, Margaret Larson, Irwin Murphy, Monique Murphy, *Melody Nagel-Hisey*, John Schock.
22. DENHOLM. Bev Beland, *Orval Beland*.
23. EASTEND. Roxie Binkley, Duane Bristow, Kevin Bristow, Tom Donald, *Robert Gebhardt*, Mary Ham, June Higgins, Harvey Johnson, Keith Schwett, Mary Thomson, Heidi Topham, Eldon Wig.
24. EDENWOLD. *Jocelyn Hextall*.
25. ENDEAVOUR. *Norman Harris*.
26. ESTEVAN. Barry Dies, Marilyn Dies, Kathy Hedegard, Guy Wapple, Sandra Wapple.
27. ESTUARY NORTH. Barry Cocks, Cathy Cocks, *Dean Francis*, Fran Francis.
28. FENTON. *Carman Dodge*, Moe Mareschal, Don Weidl.
29. FORT QU'APPELLE. Jim Armstrong, Joanne Davis, Tim Davis, Doreen Harman, Barbara Hooper, Alice Isfan, Jack Lowe, Jean McKenna, *Alan Mlazgar*, Francine Ormiston, Wendy Paquin, Florence Pearpoint, Keith Stevens, Kim Stevens, Ted Stevenson, David Sutherland, Elaine Willox.

30. GARDINER DAM. Ryan Dudragne, Greg Fenty, Maxine Forsberg, Jeff Jensen, Ron Jensen, Nick Saunders, Marten Stoffel, *Guy Wapple*.
31. GOOD SPIRIT LAKE. *Bill Anaka*, Joyce Anaka, Thom Carnahan, Oney Pollock, Dorothy Riesz, Ray Riesz, Daryl Stevenson, Lloyd Wilson, Marj Wilson.
32. GRAYSON. Carina Helm, *Charles Helm*, Daniel Helm, Linda Helm, Jeanette Zimmer, Karl Zimmer.
33. HARRIS. Ryan Dudragne, Ron Jensen, Nick Saunders, *Guy Wapple*.
34. HAZLET. Laurent Dudragne, Ryan Dudragne.
35. HUDSON BAY *John Daisley*, Joyce Hayes, Les Hayes, Agnes Lewellin, Carol Paskell, Audrey Reid, Gloria Stang, Peggy Trafford, John Zolkavich.
36. INDIAN HEAD. E. Archer, O. Archer, J. Beattie, Y. Brown, M. Duran, E. Escott, *Irv Escott*, David Gehl, R. Gehl, Lansley Gibbons, Trevor Herriot, R. Hearn, Susan Hearn, Jim Jinks, Linda Jinks, D. Kalk, Nick Kucharan, D. Loran, Karen McIver, S. Nichols, A. Scott, Brian Scott, B. Scott, G. Scott, Lorne Scott, Gary Seib.
37. KELVINGTON (Roscommon S.D.). Bernice Althouse, Kate Althouse, Marjorie Finnie, Ruby Finnie, Brian Irving, Mary O'Brien, *Dianne Sloan*, Marguerite Sloan.
38. KENASTON. *P. Lawrence Beckie*.
39. KENOSEE LAKE. Boyd Metzler, *John Pollock*.
40. KITCHEN NORTH. *Dallas Fairburn*.
41. KILWINNING. *Ed Driver*, Margaret Driver.
42. KINDERSLEY NORTH. *Jean Harris*, Keith Harris.
43. KINISTINO (Horseshoe Bend). *Verna Messer*, Mika Messer.
44. KINLOCH. *Don Forbes*, Doreen Forbes, Cliff Logan, Joyce Logan, Doreen Wickstrom.
45. KYLE. Ralph Barlow, Sig Jordheim, Greg Nelson, Yvonne Nelson, Glen Pederson, Martin Stoffel, Myrna Tangen, *Dan Zazelenchuk*.
46. LA RONGE. Barb Biliski, Sharon Feschuck, Peter Mizanski, *John Schisler*, Joan Shewchuk, Karen Waters.
47. LAST MOUNTAIN LAKE N.W.A.-NOKOMIS. Ross *Dickson*.
48. LEADER NORTH. *Daisy Meyers*.
49. LOVE - TORCH RIVER. *Bert Dalziel*, Duke Dalziel, Joan Dalziel, Kari Dalziel, Sara Dalziel, Scott Edwards, Elaine Ingster, Roseanne Kirkpatrick, Ron Knutson, Terry Knutson, Eilene L'Heureux, Bill Matthews, Lynn Matthews, Bev Macauley, Dave Macauley, Lillian Nessel, John Sinclair, Leonard Turtle.
50. LUSELAND. *Kim Finley*, Estelle Finley, Graeme Finley, Liam Finley, Valerie Finley.
51. MACDOWALL. *Myron Barton*, Lon Borgerson, Val Drummond, Sylvia Pocha, Barb Sather, Alan Smith, Ione Surbey, Shirley Tait, Bob Tunstall.
52. MEADOW LAKE. Bill Caldwell, Janet Caldwell, Deirdre Todd, Phyllis Todd, William Todd, *Bob Wilson*, Ian Wilson.
53. MOOSE JAW. *Alan Smith*.
54. MOOSE MOUNTAIN. Arlie Altwasser, Darlene Altwasser, Bill Fletcher, Dorothea Fletcher, Doyle Thomas, *Val Thomas*.
55. MORSE. Stella Enns, Mike Francis, Randy McCulloch, Pete McHugh, Joel Priebe, Ken Priebe, *Myrna Priebe*, Lori Wilson.
56. NIPAWIN. *Carol Blenkin*, Vi Budd, Joyce Christiansen, Rose-Marie Cornand, Rick Douslin, Cary LeCuyer, Jennette LeCuyer, Meghan LeCuyer, Trevor LeCuyer, Wally Mollberg, Shelinda Phillips, Don Weidl.
57. NISBET FOREST, NORTHWEST. *Sandra Jewell*.
58. NISBET FOREST, WEST. *Kim Clark*.
59. ODESSA. *Arden Curts*, Denny Curts, Denise Curts.
60. OUTLOOK. Randi Edmonds, *Alan Smith*, Graham Thomson.
61. PIERCE LAKE. *Ted Hindmarxh (Non-Participating compiler)*, Paul Paulus, Phil Shore.
62. PIKE LAKE. Carol Blenkin, Lucille Bradatsch, Ann Christensen, Jill Cornford, Peter Cornford, David Cook, Louise Cook, Gordon Crockford, Ryan Dudragne, Betty Ann Dunlap, Lorne Duczek, Joan Feather, Greg Fenty, Daniel Giesbrecht, Michael Gollop, May Haga, Ron Jensen, Jeffrey Jensen, Audrey MacKenzie, Bill Mackenzie, Bob McNaughton, *Hilda Noton*, Lynn Oliver, Scotty Oliver, Keith Pahl, Frank Roy, Mary Jean Roy, Nick Saunders, Angela Stern, Marten Stoffel, Joe Stookey, Phil Taylor, Ruth Welsh, Bev Will, Michael Williams, Jim Wood, Nancy Young.
63. PRINCE ALBERT. Ralph Abrey, Jim Bahr, Joan Bates, Kim Clark, Kiri Clark, Shamara Clark, *Carman Dodge*, Hamilton Greenwood, Ruth Griffiths, Sandra Jewell, Elaine McMillan, Michael Newman, John Rye, Gerri Smith, Don Weidl.

64. QU'APPELLE. Melanie Beattie, *Christine Blair*, Frank Veresh.

65. QU'APPELLE VALLEY DAM. Ryan Dudragne, Daniel Giesbrecht, Robert Johanson, Mary Loewen, Frank Roy, Nick Saunders, Marten Stoffel, Guy Wapple, *Michael Williams*.

66. REGINA. Lionel Bonneville, Lola Mae Crawley, Ron Crawley, Shirley Friel, Dave Hall, Maia Herriot, Trevor Herriott, Frances Hilderman, Gayle Hipperson, *Dale Hjertaas*, Paule Hjertaas, Alan Isley, Phyllis Isley, Wayne Koenig, Rhéal Larouche, Bob Luterbach, Lauren Mang, Kim Mann, Val Mann, Joanne Martin, Stephen Moore, Gillian Mothersil, Wayne Pepper, Brett Quiring, Al Ratch, Miriam Richert, Bob Roy, Joan Roy, Lyle Saigeon, Michael Saigeon, Tom Sawatzky, Frank Switzer.

67. ROULEAU. Yvonne Bean, Julie Huckabay, Louise Huxley, Terry Huxley, *Patricia Sterzuk*, Linda Thome.

68. ROUND LAKE (Qu'Appelle Valley). *Boyd Metzler*, Mary Ward, Pat Ward.

69. SALTCOATS. Freda Angus, Arden Bradford, Donna Bradford, Olga Brygadier, Walter Brygadier, Joan Farquharson, Walter Farquharson, *Shirley Jowsey*, Brian Louttit, Bev McLaren, Rae McLaren, Betty Michael, George Murray, Laurie Murray, Herb Rook, John Sawkey, Carol Tangedahl, Rudy Tangedahl, Earl Upshall, Reg Wade, Joan Wilson, Rob Wilson, Shevon Wilson.

70. SASKATCHEWAN LANDING PROVINCIAL PARK. Laurent Dudragne, Ryan Dudragne, *Dan Zazelenchuk*, Ray Zeller.

71. SASKATCHEWAN RIVER FORKS. Doug Boivin, Carman Dodge, *Don Weidl*.

72. SASKATOON. Don Adams, Tony Allen, Alison Baudru, Lou Baudru, Neva Bayliss, Belinda Betker, Jim Beveridge, Heinz Buchman, Annemarie Buchmann-Gerber, Jennifer Burgess, Mike Chorney, George Christenson, Jacquie Christenson, Ken Coutu, Ann Coxworth, Ewen Coxworth, Gordon Crockford, Yvonne Cuttle, Bill Davenport, Ron Delver, Lorne Duczek, Anne Dzus, Tammy Elliot, Melanie Elliott-Acton, Kathy Exner, David Forbes, Kamal Gabadage, Valerie Girling, Branimir Gjetvaj, Bob Godwin, Mike Gollop, Bob Green, May Haga, Audrey Hall, John Hanbidge, Katie Hanbidge, Marlene Hanbidge, Peter Hardie, Donna Haugen, Karen Hayward, Cathy Holtslander, Diana Hull, Kathryn Hull, Peter Hull, Gail James, Marlene Kalanack, Richard Kerbes, Bill Kerr, Gordon Koshinsky, Margaret Koshinsky, Anna Leighton, Doreen Leighton, Ted Leighton, Cathy Lewty, Mary Loewen, Bob McNughton, Kathy Meeres, Colleen Meldrum, Ted Melville, Larry Mitchell, Hilda Noton, Ken Nyeste, John Patterson, Asha Perera, Earl Persy, Alison Philips, Marella Rosta, Mary Jean Roy, Craig Salisbury, Lorriene Salisbury, Trish Santo, Jennifer Saunders, Nick Saunders, Marjorie Scharf, Doug Schmeiser, Irene Schmeiser, Linda

Schnedar, Jan Shadick, Stan Shadick, Henry Shpyth, Jan Solem, Valerie Stacey, Marie Stephenson-Kerr, Marten Stoffel, Philip Taylor, Gwen van der Kamp, Guy Wapple, Robert Wapple, Kevin Weimer, George West, Bev Will, *Michael Williams*, Jim Wood, Stan Woynarski, Dan Zazelenchuk, Norman Zlotkin.

73. SAWYER LAKE. Maureen Blight, Kathleen Pitt, Michael Pitt, *David Weiman*.

74. SHAMROCK. *Hugh Henry*, Milton Knudsen, Sylvia Knudsen, Randy McCulloch, Joel Prieb, Lori Wilson.

75. SINTALUTA. Rosalie Nameth, Alicia Willoughby, *Jackie Willoughby*, Ken Willoughby, Shylah Willoughby, Zaynna Willoughby

76. SNOWDEN. Esther Chamberlain, Dale Debbler, Sylvia Debbler, Diane Friesen, Ed Hagel, *Irene Hagel*, Lilly Kuzniar, Linda Patton, George Pickett, Heather Priestley, Karen Priestley, Bev Smears, Tim Thompson, Allen White, Irene White, Les White.

77. SPINNEY HILL. *Ed Driver*, Margaret Driver.

78. SQUAW RAPIDS. *Ryan Dudragne*.

79. SWIFT CURRENT. Jacquie Bolton, Stacy Bolton, Norris Currie, Laurent Dudragne, Mary Ann Dudragne, Dave Green, Esther Green, Norma Hain, Leonard Head, *Hugh Henry*, Stephanie Kaduck, Verna Lynn Knipfel, Janet Payne, Harold Steppuhn.

80. TOGO. Donna Dewores, Barb Elsasser, *Doug Elsasser*, Amanda Harper, Ed King, Louise King, William Koreliuk, Edith Mann, Fred Mann,

81. WEYBURN. Cecil Burr, Dale Huff, Sandy Huff, Alma McCormick, Darcy McCormick, Kerstin McCormick, Roxanne McCormick, Goretti Pennington, Boyd Stewart, Doyle Thomas, Val Thomas, Kim Thorson, Myrt Thorson, Dorothy Whitell.

82. WHITE BEAR. *Dan Zazelenchuk (Non-Participating Compiler)*, Gary Jordheim, Sig Jordheim.

83. WHITEWOOD. Carole Armstrong, Cindy Ashfield, Joe Ashfield, Paul Ashfield, Freda Ede, Tom Ede, Art Hinse, Mavis Kay, Joyce Kydd, Florence Luhtala, Jean Meadows, Ila Meszaros, Karl Meszaros, *Boyd Metzler*, Harry Mitchell, Marilyn Mitchell, Donna Mohr, Rod Mohr, Dawn Vennard, Diane Veresh, Pat Ward.

84. WINGARD-FORT CARLTON. *Myron Barton*, Rebecca Beam, Jeanine Forseille, Mitch Forseille, Julie Gustafson, Laurel Jensen, Ruth Prosser, Philip Taylor, Alan Smith.

85. YORKTON. Bill Anaka, Joyce Anaka, Lorna Bright, Cheryl Fraser, Bob Graham, Joyce Muir, Gloria Rathgeber, Dorothy Riesz, Ray Riesz, Dorothy Riffel, Bonnie Rushowick, *Geoff Rushowick*, Barry Sharpe, Dorothy Skene, Stan Williams.

Table 1-1 Weather and Snow Cover

Locality	Date	Minimum Temp (°C)	Maximum Temp (°C)	Minimum Wind (km/hr)	Maximum Wind (km/hr)	Minimum Snow (cm)	Maximum Snow (cm)	Sky A.M.	Sky P.M.
Archerwill	15 Dec 2010	-7	-6	13	26	25	25	overcast	overcast
Avonlea	21 Dec 2010	-17	-16	0	5	10	20	clear	clear
Bangor		-21	-19	10	15	10	22	light fog	overcast
Biggar	27 Dec 2010	-11	-8	20	50	0	20	partly cloudy	overcast
Birch Hills	20 Dec 2010	-19	-13	2	2	20	25	mostly clear	mostly clear
Broadview	26 Dec 2010	-9	-4	5	5	15	20	clear	clear
Bromhead	2 Jan 2011	-13	-5	6	6	10	30	light snow	light snow
Cabri	4 Jan 2011	-9	-4	30	40	10	10	light snow	light snow
Candle Lake	30 Dec 2010	-25	-19	5	10	15	20	clear	clear
Cater	1 Jan 2011	-24	-18	4	15	15	30	mostly clear	partly cloudy
Christopher Lake	17 Dec 2010	-13	-12	7	11	20	23	partly cloudy	cloudy
Churchbridge	23 Dec 2010	-20	-12	6	11	25	50	light fog	mostly clear
Clark's Crossing	18 Dec 2010	-16	-15	15	22	15	30	overcast	overcast
Codette Lake	1 Jan 2011	-26	-17	10		20	25	mostly clear	mostly clear
Cold Lake-Pierceland	25 Dec 2010	-9	-6	9	17	18	40	partly cloudy	partly cloudy
Coronach	4 Jan 2011	-6	-3	10	20	20	40	overcast	overcast
Craven	18 Dec 2010	-18	-14	20	25	20	50	overcast	overcast
Creighton	1 Jan 2011	-33	-25	0	0	30	50	clear	clear
Crooked Lake	24 Dec 2010	-11	-9	5	10	15	30	light fog	clear
Crooked River	22 Dec 2010	-20	-15	15	25	20	40	partly cloudy	mostly clear
Cypress Hills P.P.	30 Dec 2010	-20	-19	5	10	30	45	light snow	mod. snow
Denholm	25 Dec 2010	-10	-5	12	30	10	25	partly cloudy	partly cloudy
Eastend	4 Jan 2011	-3	-8	5	50	15	60	partly cloudy	mostly clear
Edenwold	27 Dec 2010	-17	-9	2	2	20	30	mostly clear	clear
Endeavour	26 Dec 2010	-15	-6	2	5	30	45	clear	mostly clear
Estevan	31 Dec 2010	-25	-22	10	15	5	20	partly cloudy	mostly clear
Estuary North	5 Jan 2011	-3	-1	0	0	0	10	overcast	overcast
Fenton	21 Dec 2010	-14	-13	10	10	20	20	overcast	light snow
Fort Qu'Appelle	16 Dec 2010	-12	-8	10	10			light snow	mostly clear
Gardiner Dam	20 Dec 2010	-21	-15	0	20	0	15	mostly clear	partly cloudy
Good Spirit Lake	21 Dec 2010	-18	-12	2	10	30	35	overcast	overcast
Grayson	26 Dec 2010	-10	-1	0	15	10	30	mostly clear	mostly clear
Harris	16 Dec 2010	-12	-10	10	20	5	10	overcast	overcast
Hazlet	27 Dec 2010	-8	-3	0	15	10	20	partly cloudy	light snow
Hudson Bay	1 Jan 2011	-25	-20	2	5	50	60	clear	
Indian Head	30 Dec 2010	-18	-15	0	0	38	38	clear	clear
Kelvington	2 Jan 2011	-25	-21	5	5	35	55	clear	clear
Kenaston	18 Dec 2010	-15	-11	0	5	8		light fog	mostly clear
Kenosee Lake	18 Dec 2010	-11	-6	10	25	25	50	cloudy	partly cloudy
Ketchen North	26 Dec 2010	-14	-16	15	20	32	45	mostly clear	mostly clear
Kilwinnning	28 Dec 2010	-12	-9	0	15	10	25	clear	partly cloudy
Kindersley North	26 Dec 2010	-10	-6	2	5	15	25	partly cloudy	mostly clear
Kinistino	19 Dec 2010	-19	-12			14	32	cloudy	cloudy
Kinloch	3 Jan 2011	-19	-14	5	15	30	35	partly cloudy	mostly clear
Kyle	23 Dec 2010	-15	-8	20	30	10	30	overcast	overcast

Table 1-2 Weather and Snow Cover

Locality	Date	Minimum Temp (°C)	Maximum Temp (°C)	Minimum Wind (km/hr)	Maximum Wind (km/hr)	Minimum Snow (cm)	Maximum Snow (cm)	Sky A.M.	Sky P.M.
La Ronge	4 Jan 2011	-20	-16	9	13	18	30	light snow	
LMLNWA-Nokomis	18 Dec 2010	-15	-13	15	20	7	27	overcast	overcast
Leader North	26 Dec 2010			0	5	28	30	mostly clear	partly cloudy
Love-Torch River	26 Dec 2010	-20	-10	0	2	26	30	clear	clear
Luseland	27 Dec 2010	-17	-8	0	15	6	18	mostly clear	mostly clear
Macdowall	30 Dec 2010	-22	-20	0	0	20	30	clear	clear
Meadow Lake	26 Dec 2010	-15	-13	2	10	15	30	mostly clear	partly cloudy
Moose Jaw	16 Dec 2010	-10	-8	0	5	0	50	moderate fog	light snow
Moose Mountain	3 Jan 2011	-18	-15	6	11	10	12	mostly clear	clear
Morse	18 Dec 2010	-18	-1	15	39	10	58	light fog	moderate fog
Nipawin	28 Dec 2010	-11	-9	11	22	20	30	clear	mostly clear
Nisbet Forest NW	20 Dec 2010	-16	-11	2	13	3	30	cloudy	cloudy
Nisbet Forest West	1 Jan 2011	-29	-17	1	3	30	40	mostly clear	partly cloudy
Odessa	29 Dec 2010	-22	-14	5	10	40	40	mostly clear	mostly clear
Outlook	26 Dec 2010	-10	-3	0	10	10	30	partly cloudy	clear
Pierce Lake	6 Jan 2011	-2	1	25	50	20	30	mostly clear	mostly clear
Pike Lake	3 Jan 2011	-24	-19	6	20	10	30	mostly clear	partly cloudy
Prince Albert	19 Dec 2010	-14	-13	10	20	20	20	light snow	light snow
Qu'Appelle	30 Dec 2010	-22	-15	5	5	40	40	clear	clear
Qu'Appelle Dam	19 Dec 2010	-12	-10	18	29	15	30	cloudy	partly cloudy
Regina	27 Dec 2010	-8	-4	5	20	25	60	clear	cloudy
Rouleau	3 Jan 2011	-26	-20	10	15	20	60	partly cloudy	mostly clear
Round Lake	22 Dec 2010	-22	-12	10	20	15	30	clear	clear
Saltcoats	3 Jan 2011	-15	-10	2	5	22	34	mostly clear	mostly clear
Sask. Landing P.P.	28 Dec 2010	-12	-6	2	5	4	20	overcast	clear
Sask. River Forks	18 Dec 2010	-16	-16	10	10	15	20	overcast	overcast
Saskatoon	26 Dec 2010	-7	-3	9	24	15	30	mostly clear	partly cloudy
Sawyer Lake	1 Jan 2011	-24	-11	2	5	30	35	clear	mostly clear
Shamrock	29 Dec 2010	-17	-13	30	40	30	35	overcast	overcast
Sintaluta	30 Dec 2010	-21	-13	5	5	37	37	clear	clear
Snowden	4 Jan 2011	-14	-12	0	0	13	30	light snow	overcast
Spinney Hill	16 Dec 2010	-11	-9	10	19	10	15	moderate fog	light fog
Squaw Rapids	1 Jan 2011	-23	-19	2	10	25	60	mostly clear	partly cloudy
Swift Current	18 Dec 2010	-17	-16	10	30	18	32	mostly clear	mostly clear
Togo	5 Jan 2011	-19	-17	5	25	30	40	cloudy	partly cloudy
Weyburn	18 Dec 2010	-15	-11	5	10	10	30	partly cloudy	partly cloudy
White Bear	25 Dec 2010	-9	-6	0	30	4	25	overcast	overcast
Whitewood	28 Dec 2010	-10	-5	5	15	10	30	clear	overcast
Wingard-Ft. Carlton	29 Dec 2010	-20	-18	5		20	30	clear	clear
Yorkton	29 Dec 2010	-16	-12	20	20	15	45	light snow	partly cloudy

Table 2-1 Effort and Habitat Coverage. Wild Fruit: p=poor, f=fair, g=good, e=excellent.

Locality	Effort						Habitat Coverage (%)													Wild Fruit Crop
	Participants	Km on foot	Hours on foot	Km by vehicle	Hours by vehicle	Hours at feeders	Evergreen forest	Mixedwood forest	Deciduous forest	Aspen grove/farmland	Aspen grove/prairie	Native prairie	Tame pasture	Farmland	Farmsteads	Urban	Open water	Riparian	Shield, bog,swamp	
Archerwill	8					30.0									100					f
Avonlea	5	2.0	1.5	102	7.0	2.5			15			5	5	45	15	15				p
Bangor	6			24	2.0	8.0				30	20			10	40					p
Biggar	8	11.0	7.8	454	15.0	5.0				16				57		27				g
Birch Hills	4	4.0	2.0	123	5.0	2.0			5	40			5	35	5	5		5		p
Broadview	3	1.5	1.0	150	7.0	2.0			20	35		5		25	5	10				p
Bromhead	2			120	5.0									95	5					
Cabri	1	1.0	0.5	125	3.2															p
Candle Lake	5	5.0	2.0	190	9.0		20	20	30							30				p
Cater	2			237	6.8	1.5	5	10	5	15			5	50	5	5				f
Christopher Lake	1	10.0	3.5					65		35										p
Churchbridge	11			150	12.0	42.0				10		19		68	2	1				f
Clark's Crossing	25	20.5	15.1	603	28.6	2.0				27	1	1	1	17	23	24	1	5		p
Codette Lake	4	4.0	2.0	89	3.0		5	10	20	20				15	25		5			p
Cold Lake-Pierceland	5			118	5.0	1.0		20						15	10	55				f
Coronach	1	2.5	2.0	105	4.5							5	5	35	10	30	15			p
Craven	26	14.0	8.0	545	22.5	7.0				5				60	15	20				f
Creighton	2	2.0	1.0	130	7.0	2.0	10	10	10							10			60	p
Crooked Lake	2	0.8	0.8	167	5.5				25	15	10			10	10		30			g
Crooked River	6			50	2.0	14.5		40						40	20					p
Cypress Hills P.P.	6	8.0	4.5	15	1.0	1.0	40	40	8			10			2					g
Denholm	2			225	6.5	2.0				20			5	70	2	3				f
Eastend	12	10.0	10.0	110	19.0	4.0														p
Edenwold	1			4.5	1.0	5.0								20		80				e
Endeavour	1	2.0	1.5	35	2.5	3.0		10		30					40	20				p
Estevan	5	5.0	4.3	153	5.8	2.0								17	5	38	10	30		g
Estuary North	4	4.0	4.0	30	4.0	2.0			20			25		50	5					p
Fenton	3	1.0	0.5	115	5.0															p
Fort Qu'Appelle	17				22.0				5	20				20		50	5			p
Gardiner Dam	8	17.0	13.8	437	15.0	1.0			5					50	8	4	25	8		g
Good Spirit Lake	9	21.0	4.0	106	6.5	2.0		5	5	5		5	5	30	5	40				p
Grayson	6	13.0	5.0	60	2.0	2.0			20	20	20			10	20		10			p
Harris	4	6.0	5.0	205	7.3					24				48	5	23				f
Hazlet	2	2.0	0.7	195	4.4							15		80	5					
Hudson Bay	9	4.0	1.0	15	2.0	20.0		10						10	80					
Indian Head	26	9.5	4.5	508	10.0	20.0					10	5	10	70	4	1				p
Kelvington	8	1.0	2.0	58	3.0	18.0				30				60	10					p
Kenaston	1			154	6.0							10		80		10				
Kenosee Lake	2	3.0	1.0	135	4.5	1.0		5	40	10	5					40				f
Ketchen North	1	0.8	1.5	50	1.5	6.5				30			20	20	20	10				
Kilwinnning	2			132	7.0		5	15	5	50			5	20						p
Kindersley North	2			93	5.0															f
Kinistino	2	2.0	1.0	20	5.0	0.3		30					40	20	10					g
Kinloch	5	7.0	4.0	115	5.0	14.0	20	20	15	25					20					p
Kyle	8	4.0	2.0	379	14.5	2.0					2	26	5	63	1	1		2		p

Table 2-2 Effort and Habitat Coverage. Wild Fruit: p=poor, f=fair, g=good, e=excellent.

Locality	Participants	Km on foot	Hours on foot	Km by vehicle	Hours by vehicle	Hours at feeders	Evergreen forest	Mixedwood forest	Deciduous forest	Aspen grove/farmland	Aspen grove/prairie	Native prairie	Tame pasture	Farmland	Farmsteads	Urban	Open water	Riparian	Shield, bog,swamp	Wild Fruit Crop
La Ronge	6					3.5		100												
LMLNWA-Nokomis	1	4.0	1.5	198	5.0	1.3				10	5	20	10	40	1	1	t	13		
Leader North	1	10.0	3.0	30	4.0							30	30	15	20		5			g
Love-Torch River	18		2.0	222	9.0	35.0	10	10		60					10	10				p
Luseland	5	4.5	2.5	176	4.5	2.0				30		10	10	30	10	10				f
Macdowall	8			50	2.7	10.0	2	2	2	2	2			20	70					
Meadow Lake	7	8.0	2.0	225	3.0	5.0		40						30		30				f
Moose Jaw	1	3.0	2.5	120	6.0									15	5	60	20			f
Moose Mountain	6			130	5.5	2.0		15	10	5			3	40	2	10	15			
Morse	8	3.5	1.2	346	27.3	1.0							3	90	7					g
Nipawin	12	3.0	3.0	130	21.0	10.0	20	10		5				30	10	20	5			
Nisbet Forest NW	1	1.0	1.0			2.5		30							70					g
Nisbet Forest West	1	0.5	0.5	147	4.3		5	25	5					65						f
Odessa	3	1.0	1.0	2	6.0	1.0					10	30		50	10					p
Outlook	3	2.0	2.5	107	2.8	0.5			5		5		5	40		45				p
Pierce Lake	2			102	6.7		10	30	35	10				10			5			
Pike Lake	37	26.0	19.8	501	23.8	5.0			15	10			5	15	15	40				p
Prince Albert	15	17.0	7.5	413	22.5	3.0	20			20				10	5	45				p
Qu'Appelle	3	1.0	1.5	20	0.5	2.0					20	10		40	30					p
Qu'Appelle Dam	9	10.5	12.4	524	16.5			3	21	8	3	2	14	18	6	23	2			p
Regina	34	50.0	18.5	578	21.5	16.0			1	1	2		2	38	8	48				f
Rouleau	6		0.5		5.8	8.0					5			80	5	10				p
Round Lake	3	1.0	0.8	185	6.5	3.0			25	25				15	15		20			g
Saltcoats	23	2.0		153										15	75	10				p
Sask. Landing P.P.	4	7.0	2.4	225	8.8					20		25	5	39	1			10		g
Sask. River Forks	3	4.0	1.5	84	5.5		15	20	20	15			5	15	5		5			p
Saskatoon	100	108	69.6	894	43.7	86	1	2	1	13	1	1	2	5	4	64	2	4		p
Sawyer Lake	4	3.5	2.0	22	4.0	1	5	10		30				50		5				f
Shamrock	6	3.0	1.5	202	14.5									80	20					
Sintaluta	6	1.5	2.0	80	2.0	4.0					20	20	10	30	10	10				p
Snowden	13		2.5	100	2.5	3.0		10						20	60	10				f
Spinney Hill	2	2.0	0.6	150	5.8				35	25		5		35						f
Squaw Rapids	1	3.0	2.0	134	4.4			93						2			5			p
Swift Current	14	33.0	13.5	321	17.0	9.5						2	3	15	8	72				
Togo	9	4.0	1.0	70	2.0			20	40	40										p
Weyburn	14				8.0	4.0		5		13			5	70	2	5				p
White Bear	2	1.0	0.8	16	2.3							20	5	73	1			1		f
Whitewood	21	6.0	6.5	571	21.5	33.0				30				10	10	50				f
Wingard-Ft. Carlton	8	0.3	0.3	100	4.3	10.0		5	5	5	5			20	60					
Yorkton	15	1.5	0.8	113	6.5	10.0					50					50				g

Table 3-1 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	1	2	3	4	5	6	7	8	9	10	11
	Archerwill 15 Dec 2010	Avonlea 21 Dec 2010	Bandgor	Biggar 27 Dec 2010	Birch Hills 20 Dec 2010	Broadview 26 Dec 2010	Bromhead 2 Jan 2011	Cabri 4 Jan 2011	Candle Lake 30 Dec 2010	Cater 1 Jan 2011	Christopher Lake 17 Dec 2010
Species											
Canada Goose	(2)										
Mallard	(1)										
Common Goldeneye											
Common Merganser											
Gray Partridge	(21)	54	43	5	6	6	93				
Ring-necked Pheasant							72				
Ruffed Grouse	2				2	4			(2)		
Sharp-tailed Grouse	1	12	62	18		29	14	13			
Bald Eagle	1										
Northern Goshawk					1						
Golden Eagle											
Merlin											
Rock Pigeon	(34)	80	12	109	113	54	15	5		26	
Eurasian Collared-Dove				5							
Great Horned Owl	(1)			1	2		1				
Snowy Owl		1					4				
Downy Woodpecker	9	1	7	2	7	5	1		3	2	2
Hairy Woodpecker	4	2	6	2	4	2			1		2
Northern Flicker											
Pileated Woodpecker						1			1		
Northern Shrike	(1)			2		2					
Gray Jay	(3)								10	(1)	
Blue Jay	17	1		4	4	2			5	1	
Black-billed Magpie	8	10	28	105	108	50	1	26	17	61	
Common Raven	5	5	25	87	35	56	3	2	192	204	9
Horned Lark				36	2	1	85	36			
Black-capped Chickadee	35	5	43	64	65	34			55	23	30
Boreal Chickadee	(3)								17		6
Red-breasted Nuthatch	(1)	1		1		3			3		
White-breasted Nuthatch	2	1	1		1	7			3	1	2
Brown Creeper											
Golden-crowned Kinglet				3		2					
American Robin											
European Starling					13	8	17				
Bohemian Waxwing				90	36	(22)		10			
Snow Bunting	(50)	1		903	51	85	2	2		694	
Dark-eyed Junco	(1)	1		(1)							
Pine Grosbeak	51									36	7
House Finch		(1)		36							
White-winged Crossbill	(7)								3		
Common Redpoll		2		5	126	3			4	(4)	4
Hoary Redpoll					2						
Pine Siskin				(1)							
Evening Grosbeak	67								1		26
House Sparrow	11	230	102	513	81	77	32	175		20	
Total Birds Count Day	219	408	329	1995	659	438	341	270	316	1068	88
Total Birds only in CP	129	1	0	2	0	22	0	0	2	5	0
Total Species Count Day	14	17	10	22	19	24	14	9	15	10	9
Total Species only in CP	15	1	0	2	0	1	0	0	1	2	0

Table 3-2 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	12	13	14	15	16	17	18	19	20	21	22
	Churchbridge 23 Dec 2010	Clark's Crossing 18 Dec 2010	Codette Lake 1 Jan 2011	Cold L-Pierceland 25 Dec 2010	Coronach 4 Jan 2011	Craven 18 Dec 2010	Creighton 1 Jan 2011	Crooked Lake 24 Dec 2010	Crooked River 22 Dec 2010	Cypress Hills PP 30 Dec 2010	Denholm 25 Dec 2010
Species											
Canada Goose		36			2161			5			
Mallard					3000			52			
Common Goldeneye		33				1		1			
Common Merganser		1									
Gray Partridge	2	71			15	75		14			(8)
Ring-necked Pheasant						1					
Ruffed Grouse	6		1			(2)		1	6	1	
Sharp-tailed Grouse		6			2	42		2			(7)
Bald Eagle		2			1	1		2	(1)	1	
Northern Goshawk		1								1	
Golden Eagle					2	1					(1)
Merlin		1									
Rock Pigeon		165			94	30	17	34		2	1
Eurasian Collared-Dove					15						
Great Horned Owl		4			1	(1)	1				(1)
Snowy Owl					1	1					
Downy Woodpecker	14	20	5	4		17	1	3	5	6	3
Hairy Woodpecker	12	11	5	1		16	4		2		4
Northern Flicker		1				1					
Pileated Woodpecker							4				
Northern Shrike	(1)										
Gray Jay			1				1		2		
Blue Jay	7	7	8	7		9		4	12		
Black-billed Magpie	18	331	43	18	1	107	13	31	25	14	35
Common Raven	55	240	60	79		69	157	16	85	2	38
Horned Lark		9	3		66	12					3
Black-capped Chickadee	66	197	52	27		150	4	92	29	62	10
Boreal Chickadee			1				10				
Red-breasted Nuthatch	4	4	1			7			1	25	
White-breasted Nuthatch	7		1	3		14		4	3		
Brown Creeper						(1)					
Golden-crowned Kinglet						2					
American Robin		2				1		1		1	
European Starling		275				23		1			
Bohemian Waxwing		2319		36		22				339	(37)
Snow Bunting	365	301	80			89		1	50		872
Dark-eyed Junco		1				9			2		
Pine Grosbeak			19	15			28	1			
House Finch	2	104				6					
White-winged Crossbill		7									
Common Redpoll	40	7	130	1		159			2		230
Hoary Redpoll	10								2		6
Pine Siskin	10								1		
Evening Grosbeak			31				2		34		
House Sparrow	185	2025	30	27	3	254		19	62	3	9
Total Birds Count Day	812	6186	471	218	5362	1132	274	287	327	468	1211
Total Birds only in CP	2	0	0	0	0	4	0	0	1	0	55
Total Species Count Day	19	31	17	11	13	30	14	22	19	14	11
Total Species only in CP	2	0	0	0	0	3	0	0	1	0	5

Table 3-3 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	23	24	25	26	27	28	29	30.	31	32	33
Species	Eastend 4 Jan 2011	Edenwold 27 Dec 2010	Endeavour 26 Dec 2010	Estevan 31 Dec 2010	Estuary North 5 Jan 2011	Fenton 21 Dec 2010	Fort Qu'appelle 16 Dec 2010	Gardiner Dam 20 Dec 2010	Good Spirit Lake 21 Dec 2010	Grayson 26 Dec 2010	Harris 16 Dec 2010
Canada Goose				858			34	17			
Mallard	6			75			23	1155		54	
Common Goldeneye				18			7	209		1	
Common Merganser				1				67			
Gray Partridge	8	2		15				59		10	7
Ring-necked Pheasant	22			151	27						
Ruffed Grouse			(1)			4	2		(4)	(1)	
Sharp-tailed Grouse	18	17		40	50		28	54		12	2
Bald Eagle	1			1			2	53	1	2	
Northern Goshawk	1				1						
Golden Eagle	(1)				1			2			
Merlin											1
Rock Pigeon	15		25	53		64	22	63		48	19
Eurasian Collared-Dove	2			28	1		2				
Great Horned Owl	5	1			2			3			5
Snowy Owl							1	3	(1)		
Downy Woodpecker	7	2	1	4	1	3	18	5	6	2	2
Hairy Woodpecker		3	2	5	2	4	9	2	7	2	1
Northern Flicker	2			1				1			
Pileated Woodpecker			(1)		1				1		
Northern Shrike		1			1	1					
Gray Jay			2								
Blue Jay	2	1	5	(2)	5	1	10	11	4	2	
Black-billed Magpie	105	4	8	18	54	41	29	170	15	14	107
Common Raven	1	5	35	7	1	31	113	13	23	19	44
Horned Lark	72				150	1		48			4
Black-capped Chickadee	34	5	20	13	6	39	123	33	38	44	27
Boreal Chickadee											
Red-breasted Nuthatch	10						6	3			
White-breasted Nuthatch		2	1	1			4	1	8	1	1
Brown Creeper	(1)			(1)							
Golden-crowned Kinglet						2					
American Robin							1				
European Starling			13	4			18	19	(6)		
Bohemian Waxwing	(6)			14	120		20	123			4
Snow Bunting	165		1	96	40	25	1	579	20	80	111
Dark-eyed Junco	2			4							
Pine Grosbeak			29						13		
House Finch				(25)			(40)				2
White-winged Crossbill	6										
Common Redpoll	30	11	6	5	37			49	12	1	173
Hoary Redpoll											
Pine Siskin	26	2	1	(3)							
Evening Grosbeak			35								
House Sparrow	114	50	23	115	105	20	158	528	28	10	419
Total Birds Count Day	655	119	207	1536	610	236	653	3297	176	305	932
Total Birds only in CP	8	0	2	35	0	0	40	0	12	1	0
Total Species Count Day	24	15	16	26	21	13	25	33	13	18	19
Total Species only in CP	3	0	2	8	0	0	1	0	4	1	0

Table 3-4 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	34	35	36	37	38	39	40	41	42	43	44
Species	Hazlet 27 Dec 2010	Hudson Bay 27 Dec 2010	Indian Head 30 Dec 2010	Kelvington 2 Jan 2011	Kenaston 18 Dec 2010	Kenosee Lake 18 Dec 2010	Ketchen 26 Dec 2010	Kilwiining 28 Dec 2010	Kindersley North 26 Dec 2010	Kinistino 19 Dec 2010	Kinloch 3 Jan 2011
Canada Goose			3								
Mallard			23								
Common Goldeneye			1								
Common Merganser											
Gray Partridge	53		44	17	(12)			3	53	1	
Ring-necked Pheasant											
Ruffed Grouse		2	6	15			8			2	5
Sharp-tailed Grouse	9	16	106		(2)	1		2			
Bald Eagle		(1)	(1)			1	(1)			2	
Northern Goshawk											
Golden Eagle	1								1		
Merlin		1									
Rock Pigeon	28	8	134		14			2	12		5
Eurasian Collared-Dove											
Great Horned Owl	3		1	1	(1)				5		
Snowy Owl			1						1		
Downy Woodpecker		7	50	9		8	4	4		1	3
Hairy Woodpecker		9	37	13	1	4	4	3		1	6
Northern Flicker											
Pileated Woodpecker			1	(1)						1	
Northern Shrike	1							1			
Gray Jay		4						4		3	9
Blue Jay		56	31	9		42	6	7		10	28
Black-billed Magpie	33	26	62	19	15	16	23	34	27	18	8
Common Raven	2	198	87	16	1	20	18	41		12	16
Horned Lark	372		9		(5)	1		1	6		
Black-capped Chickadee		98	156	45	8	126	9	71	1	10	43
Boreal Chickadee		6						2			
Red-breasted Nuthatch		5	24	6				3			1
White-breasted Nuthatch		5	15	8		13		4		1	4
Brown Creeper			1								
Golden-crowned Kinglet											
American Robin											
European Starling	2		3				2				
Bohemian Waxwing			108						6		
Snow Bunting	799	33	328	6	75	99	20	88	102	42	164
Dark-eyed Junco			12	1							
Pine Grosbeak		121		10			10			8	22
House Finch			15								
White-winged Crossbill				(10)							
Common Redpoll		28	53	29		18	10	3		32	(2)
Hoary Redpoll				3							
Pine Siskin			16	(1)	(1)	5		11			
Evening Grosbeak		199					(7)	29		27	8
House Sparrow	102		548	66	55	4	26	108	110		9
Total Birds Count Day	1411	848	1878	273	169	358	140	422	325	173	331
Total Birds only in CP	0	2	2	12	21	0	8	0	0	0	2
Total Species Count Day	14	22	31	17	7	14	12	21	12	17	15
Total Species only in CP	0	2	2	3	5	0	2	0	0	0	1

Table 3-5 Species found on 8 or more counts; () = seen during count period (CP).

Map Number	45	46	47	48	49	50	51	52'	53	54	55
	Kyle 23 Dec 2010	La Ronge 5 Jan 2011	LMLNWA 18 Dec 2010	Leader North 26 Dec 2010	Love-Torch River 26 Dec 2010	Luseland 27 Dec 2010	Macdowall 30 Dec 2010	Meadow Lake 26 Dec 2010	Moose Jaw 16 Dec 2010	Moose Mountain PP 3 Jan 2011	Morse 18 Dec 2010
Species											
Canada Goose											
Mallard	1		9	1					14		
Common Goldeneye		(1)									
Common Merganser		(1)							2		
Gray Partridge	110			12	(12)	(1)	15		(14)		562
Ring-necked Pheasant				26							20
Ruffed Grouse		7			6		7			1	
Sharp-tailed Grouse	42		6	12	(7)	7		2		28	57
Bald Eagle					1						
Northern Goshawk	1				(1)		(1)	2			(2)
Golden Eagle				1							2
Merlin	1										(1)
Rock Pigeon	175				20	14		11	387		222
Eurasian Collared-Dove	4										7
Great Horned Owl	9		2	1		(1)	(1)				10
Snowy Owl	1		1			1					4
Downy Woodpecker		2	1	2	16	(1)	6	1		8	
Hairy Woodpecker	1	(2)			16	(1)	10	5	1	6	
Northern Flicker				1							
Pileated Woodpecker		(1)		1	1		1			(1)	
Northern Shrike											(1)
Gray Jay	(1)	(17)			13						
Blue Jay	(1)	(13)			28	2	20	9		4	1
Black-billed Magpie	136	1	27	17	113	13	35	22	6	26	28
Common Raven	2	2	2	2	144	1	14	125	1	24	2
Horned Lark	35					16					170
Black-capped Chickadee	6	6	11	2	122	7	99	4	5	55	3
Boreal Chickadee		2			2			1			
Red-breasted Nuthatch	3	(1)			8	2		1	2		8
White-breasted Nuthatch			1		10		10		3	3	
Brown Creeper											1
Golden-crowned Kinglet						(1)					2
American Robin											
European Starling	1		14	1	21						24
Bohemian Waxwing	38			30		47		3	14		6
Snow Bunting	1308		525		1006	410	95	42			585
Dark-eyed Junco	1										1
Pine Grosbeak		6			94		22	10			
House Finch	11					8		8			2
White-winged Crossbill											
Common Redpoll	2				115	3	33			8	6
Hoary Redpoll					3						
Pine Siskin	7					1					
Evening Grosbeak		25			161		69	7		2	
House Sparrow	806		92	12	53	21		71	75	54	1341
Total Birds Count Day	2703	51	698	121	1957	553	436	324	514	221	3066
Total Birds only in CP	5	38	0	0	23	5	4	0	14	1	12
Total Species Count Day	25	8	18	15	22	15	14	17	13	13	24
Total Species only in CP	4	8	0	0	6	5	4	0	1	1	6

Table 3-6 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	56	57	58	59	60	61	62	63	64	65	66
	Nipawin 18 Dec 2010	Nisbet Forest NW 20 Dec 2010	Nisbet Forest West 1 Jan 2011	Odessa 29 Dec 2010	Outlook 26 Dec 2010	Pierce Lake 6 Jan 2011	Pike Lake 3 Jan 2011	Prince Albert 19 Dec 2010	Qu'appelle 30 Dec 2010	Qu'appelle Dam 19 Dec 2010	Regina 27 Dec 2010
Species											
Canada Goose										112	3
Mallard						3				53	14
Common Goldeneye										16	
Common Merganser						2					
Gray Partridge	15			18	15		4			3	261
Ring-necked Pheasant											
Ruffed Grouse	2			3			2	1			
Sharp-tailed Grouse				96			88		2	133	30
Bald Eagle	(1)						7			8	
Northern Goshawk											
Golden Eagle											
Merlin								1			2
Rock Pigeon	7		32		4		65	172		6	1037
Eurasian Collared-Dove										10	14
Great Horned Owl				1			5	1		1	2
Snowy Owl			1					1			4
Downy Woodpecker	7	4	2	2		1	27	6	3	8	18
Hairy Woodpecker	3	4	(1)	2	2		27	8	6	3	6
Northern Flicker							1				(1)
Pileated Woodpecker				2			2				
Northern Shrike							6	1		1	3
Gray Jay	2					6					
Blue Jay	7	1	3	2	9	3	13	6		4	2
Black-billed Magpie	7		13	12	12	3	227	61	4	89	46
Common Raven	508		20	11	11	9	85	280	2	12	66
Horned Lark	3		(1)							17	3
Black-capped Chickadee	24	27	36	12	12	5	401	116	28	21	58
Boreal Chickadee								5			
Red-breasted Nuthatch	3				1		2			2	66
White-breasted Nuthatch	2	2	2		2		21	1		1	16
Brown Creeper											1
Golden-crowned Kinglet			3								4
American Robin				1	1						
European Starling	42						28				37
Bohemian Waxwing	(14)				105		88	431		328	268
Snow Bunting	176		130	22	44	43	271	264	25	512	110
Dark-eyed Junco								2			19
Pine Grosbeak	9	5	13					31			
House Finch								5			66
White-winged Crossbill										26	16
Common Redpoll	13		33				72	2		95	49
Hoary Redpoll							19			2	1
Pine Siskin					1						10
Evening Grosbeak	18		36				11	38			
House Sparrow	146			48	82		386	150		63	1055
Total Birds Count Day	995	43	324	232	301	75	1875	1587	70	1528	3299
Total Birds only in CP	16	0	3	0	0	0	1	0	0	0	1
Total Species Count Day	20	6	13	14	14	9	26	25	7	27	38
Total Species only in CP	3	0	3	0	0	0	1	0	0	0	1

Table 3-7 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	67	68	69	70	71	72	73	74	75	76	77
Species	Rouleau 3 Jan 2010	Round Lake (QV) 22 Dec 2010	Saltcoats 3 Jan 2011	Sask. Landing PP 28 Dec 2010	Sask. River Forks 18 Dec 2010	Saskatoon 26 Dec 2010	Sawyer Lake 1 Jan 2011	Shamrock 29 Dec 2010	Sintaluta 30 Dec 2010	Snowden 4 Jan 2011	Spinney Hill 16 Dec 2010
Canada Goose		9				20					
Mallard		2		2		42					
Common Goldeneye						107					
Common Merganser						2					
Gray Partridge	15			30		23		241	8		
Ring-necked Pheasant								8			
Ruffed Grouse		2	1		1		1			2	
Sharp-tailed Grouse		12	2	53	7	24	(1)	50	62		4
Bald Eagle		2	4	1		(1)	(1)		4		
Northern Goshawk		1				1					
Golden Eagle		1		2							
Merlin						8					
Rock Pigeon	43	4	41	40	2	2982		42			9
Eurasian Collared-Dove						14					
Great Horned Owl			3	6		5		3	2		
Snowy Owl	1			(2)				1			
Downy Woodpecker		10	14	3	4	35	2		7	11	2
Hairy Woodpecker		10	16		8	20	1		12	9	
Northern Flicker						11					
Pileated Woodpecker			1							(1)	
Northern Shrike		1	(1)	1		2					
Gray Jay		1			1		(3)			6	
Blue Jay		16	9	2	9	58	5	8	1	17	7
Black-billed Magpie		62	27	74	24	422	6	17	30	32	54
Common Raven		71	52	8	25	333	14	1	21	44	14
Horned Lark	(8)			61				245			5
Black-capped Chickadee		129	83	14	37	754	17		32	80	34
Boreal Chickadee					6					8	
Red-breasted Nuthatch			5	3	3	156			3	3	1
White-breasted Nuthatch		10	8		2	6	3		9	4	2
Brown Creeper						7					1
Golden-crowned Kinglet						9					
American Robin					1	7			1		
European Starling	45	18				38		2			
Bohemian Waxwing			(3)	132		4038					60
Snow Bunting	125		146	84	30	47	8	1060	15	145	105
Dark-eyed Junco						5					
Pine Grosbeak		6			6		6			66	
House Finch						540					
White-winged Crossbill						53					
Common Redpoll			68		6	138	4			121	150
Hoary Redpoll			17			1					
Pine Siskin						12		2			2
Evening Grosbeak					33		12			104	
House Sparrow	50	21	38	373	40	3723	46	777	102	227	121
Total Birds Count Day	280	388	537	889	245	13680	125	2458	309	879	573
Total Birds only in CP	8	0	4	2	0	2	6	0	0	1	0
Total Species Count Day	7	20	20	18	19	46	13	15	15	16	18
Total Species only in CP	1	0	2	1	0	2	4	0	0	1	0

Table 3-8 Species found on 8 or more counts; () = seen during Count Period (CP).

Map Number	78	79	80	81	82	83	84	85				
	Squaw Rapids 1 Jan 2011	Swift Current 18 Dec 2010	Togo 5 Jan 2011	Weyburn 18 Dec 2010	White Bear 25 Dec 2010	Whitewood 28 Dec 2010	Wingard Port 29 Dec 2010	Yorkton 29 Dec 2010	Totals Count Day	Totals only in Count Period	#Counts count day	# Counts only in count period
Species												
Canada Goose									3258	2	11	1
Mallard		2						17	4548	1	20	1
Common Goldeneye	257								651	1	11	1
Common Merganser	3								78	1	7	1
Gray Partridge		41		143	19	(12)	(15)	18	2209	95	42	8
Ring-necked Pheasant		19		12					358	0	10	0
Ruffed Grouse			3			(2)	(3)		106	15	30	7
Sharp-tailed Grouse		7	12	76	17	61	11		1457	17	50	4
Bald Eagle	1	2				(1)	(1)		101	9	23	9
Northern Goshawk				1		(1)	1		12	5	11	4
Golden Eagle		2			2				18	2	12	2
Merlin									15	1	7	1
Rock Pigeon		213	15	85	120	219	2	231	7469	34	58	1
Eurasian Collared-Dove		61		21		2			186	0	14	0
Great Horned Owl		2		2	1		1		93	6	33	6
Snowy Owl		1		1					30	3	19	2
Downy Woodpecker	2		7	6		17	7	6	501	1	71	1
Hairy Woodpecker	2		14	3		24	6	6	424	4	63	3
Northern Flicker		1						(1)	20	2	9	2
Pileated Woodpecker						1	1		20	5	15	5
Northern Shrike						2	1		27	4	16	4
Gray Jay									65	25	15	5
Blue Jay	12		37			101	12		726	16	61	3
Black-billed Magpie	3	93	5	24	8	60	29	13	3777	0	82	0
Common Raven	17		78	1		61	20	161	4371	0	79	0
Horned Lark					6				1478	14	30	3
Black-capped Chickadee	24	4	56	3		205	46	41	4611	0	78	0
Boreal Chickadee	4								70	3	13	1
Red-breasted Nuthatch	2	42		4		2	3	1	434	2	42	2
White-breasted Nuthatch		1	8	3		15	7	4	275	0	56	0
Brown Creeper						(1)			11	4	5	4
Golden-crowned Kinglet		2							29	1	9	1
American Robin								1	18	0	11	0
European Starling					(2)	54		21	744	8	27	2
Bohemian Waxwing		123				7		32	8997	82	31	5
Snow Bunting	3			21	280	782	130	76	14995	50	68	1
Dark-eyed Junco		3		6		(1)	3	1	73	3	17	3
Pine Grosbeak			14				33		691	0	28	0
House Finch		22		40		(7)		2	869	73	16	4
White-winged Crossbill		22						12	145	17	8	2
Common Redpoll	6		56			77	26		2293	6	51	2
Hoary Redpoll			2				5		73	0	13	0
Pine Siskin		31				1	(4)		139	10	17	5
Evening Grosbeak	49		63				70		1157	7	26	1
House Sparrow		493	1	190	50	420	95	544	18222	0	73	0
Total Birds Count Day	387	1233	372	1143	503	2113	510	1188	86718	566		
Total Birds only in CP	0	0	0	0	2	25	24	1	566			
Total Species Count Day	16	26	16	21	9	21	22	19	91			
Total Species only in CP	0	0	0	0	1	7	5	1		6		

Table 4-1 Species found in fewer than 8 counts

Species	Locality and Number (*=Count Period)
Gadwall	Estevan (1*), Moose Jaw (1)
Blue-winged Teal	Grayson (1)
Northern Shoveler	LMLNWA-Nokomis (1)
Northern Pintail	Gardiner Dam (1), LMLNWA-Nokomis (1)
Green-winged Teal	Crooked Lake (1), LMLNWA-Nokomis (2), Moose Jaw (3)
Canvasback	LMLNWA-Nokomis (1)
Redhead	Gardiner Dam (1), Saskatoon (1)
Ring-necked Duck	Crooked Lake (1), Estevan (1)
Lesser Scaup	Crooked Lake (1), Fort Qu'Appelle (18), Gardiner Dam (11), Grayson (2), LMLNWA-Nokomis (1)
Bufflehead	Fort Qu'Appelle (2), Gardiner Dam (1), Saskatoon (1)
Hooded Merganser	Craven (1), Fort Qu'Appelle (2), Qu'Appelle Dam (1)
Spruce Grouse	Candle Lake (1), Hudson Bay (1), Kinistino (2), Love-Torch River (4)
Willow Ptarmigan	Creighton (31)
Wild Turkey	Broadview (2), Whitewood (1)
Pied-billed Grebe	Indian Head (1), LMLNWA-Nokomis (1)
American White Pelican	Gardiner Dam (10), Indian Head (1)
Sharp-shinned Hawk	Clark's Crossing (1), Estevan (1*), Regina (1), Saskatoon (4), Yorkton (1)
Cooper's Hawk	Regina (1)
Red-tailed Hawk	Archerwill (1*), Regina (1)
Rough-legged Hawk	Clark's Crossing (3), Estevan (1), Saskatoon (1)
American Kestrel	Regina (1)
Gyr Falcon	Biggar (1), Cabri (1), Harris (1), Hazlet (1), Morse (1*)
Peregrine Falcon	Love-Torch River (1*)
Prairie Falcon	Bromhead (1), Estuary N (1), Gardiner Dam (1), Kindersley N (1), Kyle (1)
American Coot	Estevan (7)
Mourning Dove	Broadview (1), Estevan (1*), Pike Lake (1*), Saskatoon (1)
Northern Hawk Owl	Nisbet Forest West (1*), Prince Albert (2), Squaw Rapids (1)
Great Gray Owl	Archerwill (1*), Hudson Bay (1*), MacDowall (1*), Sawyer Lake (1*)
Short-eared Owl	Harris (2), Kyle (1*), Morse (1*)
Boreal Owl	Churchbridge (1), La Ronge (2), Regina (2), Saskatoon (5), Togo (1)
Northern Saw-whet Owl	MacDowall (1*)
Red-bellied Woodpecker	Crooked River (1)
American 3-toed Woodpecker	Hudson Bay (4), Love-Torch River (1*), Prince Albert (1)
Black-backed Woodpecker	Archerwill (1*), Love-Torch River (1*), Squaw Rapids (1)
American Crow	Craven (3), Gardiner Dam (2), La Ronge (2*), Nipawin (1), Regina (6), Saltcoats (1), Saskatoon (14)
Townsend's Solitaire	Cypress Hill PP (6), Saskatoon (2)
Varied Thrush	Saskatoon (1)
Cedar Waxwing	Biggar (3), Estuary (4), Pike Lake (13), Swift Current (20)
Lapland Longspur	Hazlet (5), Shamrock (1), Weyburn (500)
Eastern Towhee	Rouleau (1)
American Tree Sparrow	Nipawin (1*)
Fox Sparrow	Morse (1)

Table 4-2 Species found in fewer than 8 counts

Species	Locality and Number (*=Count Period)
White-throated Sparrow	Churchbridge (4), Regina (1), Saskatoon (1), Swift Current (6)
Harris's Sparrow	Broadview (1), Churchbridge (2), Clark's Crossing (1), Hudson Bay (1), Indian Head (1*), Kyle (1)
Red-winged Blackbird	Morse (6*), Regina (1), Saltcoats (1)
Rusty Blackbird	Eastend (1), Indian Head (1), Kilwinning (1), Pike Lake (4), Prince Albert (1), Spinney Hill (1)
Common Grackle	Estevan (1*), Hudson Bay (20), Swift Current (1), Togo (1), Weyburn (1), Whitewood (1) Wingard-Fort Carlton (1)
Brown-headed Cowbird	Saskatoon (1*)
Gray-crowned Rosy-Finch	Creighton (1)
Purple Finch	Avonlea (1), Churchbridge (3), Crooked River (3), Spinney Hill (1)
Red Crossbill	Broadview (3), Cypress Hills PP (5), Good Spirit Lake (1*), Saskatoon (5), Swift Current (19)
American Goldfinch	Craven (9), Edenwold (13), Kyle (2*), Moose Mtn PP (2), Qu'Appelle Dam (1) Saskatoon (2), Wingard-Fort Carlton (1*)

Table 5 Birds not identified to species

Category	Locality and Number (*=Count Period)
Duck sp.	Saskatoon (2)
<i>Buteo</i> sp.	Saskatoon (1)
Eagle sp.	Denholm (*1)
Hawk sp.	Archerwill (*1), Morse (1)
Gull sp.	Saskatoon (1)
Crossbill sp.	Archerwill (4)



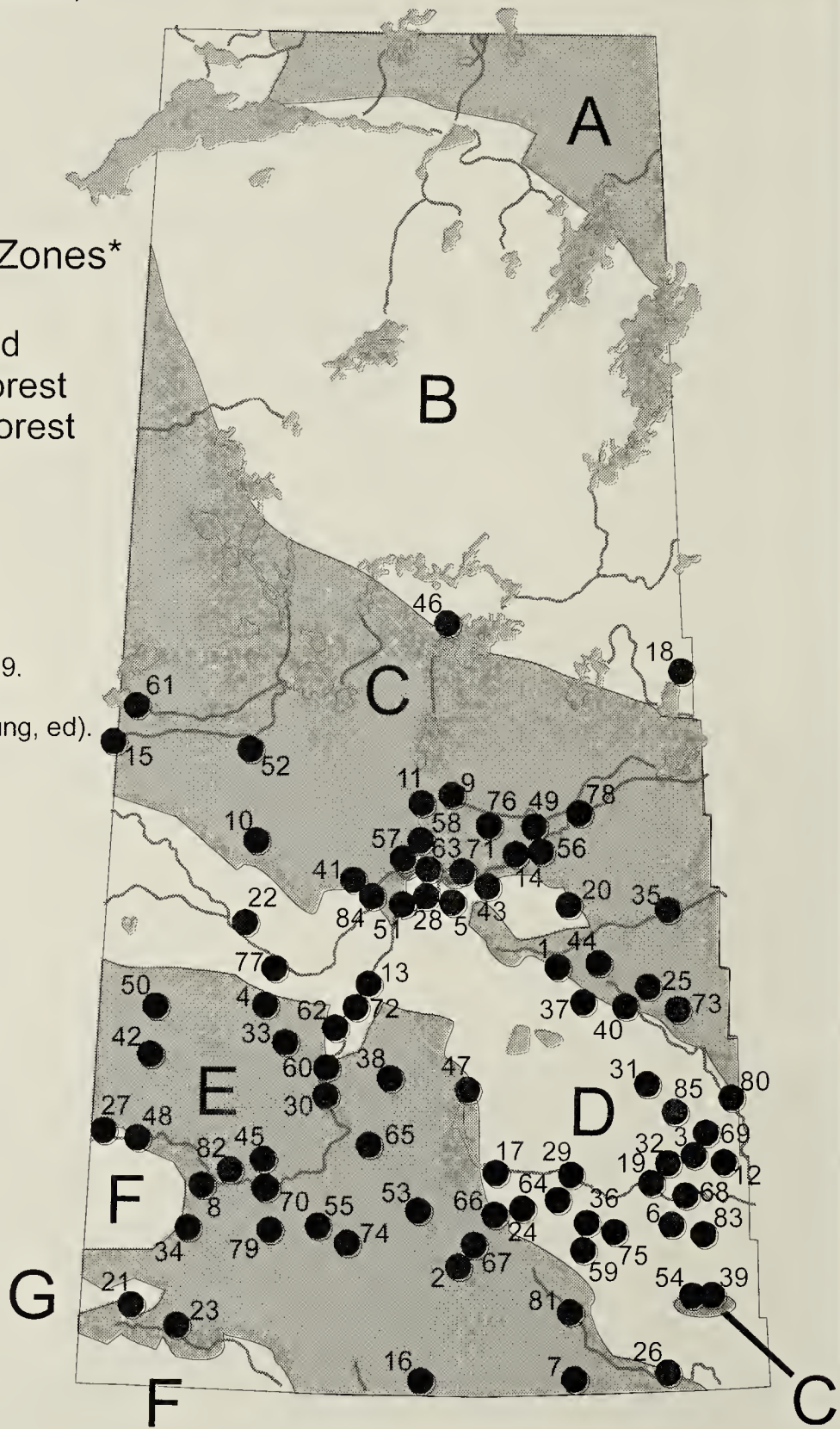
Hooded merganser (Lophodytes cucullatus) photographed shortly after the Craven Christmas count.
Kim Mann

Figure 1. Location of 2010 counts (numbers correspond to those in text under **Count Areas and Participants**).

Natural Vegetation Zones*

- A. Subarctic Woodland
- B. Northern Boreal Forest
- C. Southern Boreal Forest
- D. Aspen Parkland
- E. Mixed Prairie
- F. Dry Mixed Prairie
- G. Cypress Hills

*adapted from: Thorpe, J. 1999.
Natural Vegetation. P. 133 in
Atlas of Saskatchewan (K. Fung, ed).
Univ. of Sask., Saskatoon.



*They are much to be pitied who have not been given
a taste for nature early in life.
- Jane Austen*

Table 6. New (in ***bold italics***) and tying high counts for individual species in 2010. Count period results are in brackets.

LOCATION	2010 SPECIES COUNT	PREVIOUS LOCATION, YEAR HIGH
<i>Gardiner Dam</i>	<i>10 American White Pelican</i>	<i>4 Squaw Rapids 1997</i>
<i>Saskatoon</i>	<i>4 Sharp-shinned Hawk</i>	<i>1 N to Big Gully and Squaw Rapids</i>
Churchbridge (Count Period)	1 Boreal Owl	1 S to Valley Centre and Broadview
Crooked River	1 Red-bellied Woodpecker	1 Regina, 2001; Yorkton, 2007
Pike Lake	6 Northern Shrike	6 Saskatoon, 1963, 2007; Pike Lake 1969; Ft. Walsh 1989, 1990, 1991, 1994
Cypress Hills P.P.	6 Townsend's Solitaire	6 Saskatoon 2007
Rouleau	1 Eastern Towhee	1 Regina, 2005; Candle Lake, 2008
Hudson Bay	20 Common Grackle	15 Regina 1998



Golden-crowned kinglet
(*Regulus satrapa*).
Nick Saunders

Table 7. Population changes in numbers of selected species in 2010* compared to 2009 and the average for 5 years (2005-2009), based on the number of birds per party hour. A minus sign indicates a decrease from previous years.

Species	% change from 2009	% change from 2005-2009		% change from 2009	% change from 2005-2009
Canada Goose	-65	-80	Common Raven	31	36
Mallard	-41	-46	Horned Lark	-63	-20
Common Goldeneye	18	11	Black-capped Chickadee	19	34
Gray Partridge	75	25	Boreal Chickadee	-32	-44
Ring-necked Pheasant	41	99	Red-breasted Nuthatch	-45	43
Ruffed Grouse	57	22	White-breasted Nuthatch	21	58
Sharp-tailed Grouse	37	28	Brown Creeper	48	-20
Bald Eagle	68	73	American Robin	-94	-29
Northern Goshawk	-14	-5	European Starling	73	10
Golden Eagle	-16	5	Bohemian Waxwing	1042	13
Merlin	16	21	Cedar Waxwing	-91	-72
Rock Pigeon	24	8	Dark-eyed Junco	-31	-18
Great Horned Owl	-5	-20	Snow Bunting	-36	-9
Snowy Owl	-51	-52	Pine Grosbeak	-17	-44
Short-eared Owl	-87	-90	House Finch	74	0
Downy Woodpecker	49	55	White-winged Crossbill	-53	175
Hairy Woodpecker	25	49	Common Redpoll	-34	-58
Northern Flicker	-72	-43	Hoary Redpoll	-18	-29
Pileated Woodpecker	-30	17	Pine Siskin	-90	66
Northern Shrike	82	33	American Goldfinch	-79	-32
Gray Jay	-30	-30	Evening Grosbeak	18	29
Blue Jay	70	23	House Sparrow	4	2
Black-billed Magpie	22	24			

**As tremendous changes can occur in small sample sizes, only those species recorded on an annual average of six or more counts are included.*



ERRATUM: Note that on the inside front cover of the December 2010 issue, Figure 3 in fact shows Hooker’s bugseed, whereas Figure 4 shows the American bugseed. We regret this error.

38th ANNUAL SASKATCHEWAN
CHRISTMAS MAMMAL - 2010

Alan R. Smith

Box 154, Avonlea, SK, S0H 0C0

All but two of the 85 Christmas Bird Counts (CBC) submitted also included a mammal count. The number of mammals seen or heard (3635) and the number of species recorded (30) was slightly below average for the last decade. Indian Head led with 12 species seen or heard; Regina was the runner-up with 11.

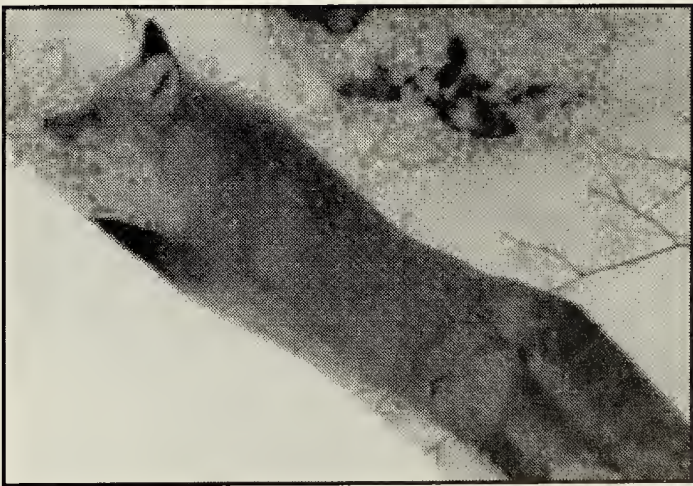
No new species were added to the all time species total. A noteworthy record was 10 raccoons at Weyburn establishing a new high count for this species; the previous high was 5 at Fort Qu'Appelle on 21 December 1996. Another record of interest was a bobcat identified by tracks on the Broadview count; there are only a handful of previous records.

For information on participants, weather, coverage and location of Christmas Mammal Counts (CMC) see the CBC summary in this issue.

Explanation of Entries in Table 1.

The number of mammals actually seen or heard on the count day is treated separately from those recorded by other means, or those recorded during the count period (14 December to 5 January) but not on the count day. Numbers of individuals seen or heard are given in Table 1 and are tallied in the first line of totals at the bottom of the table. The number of species they represent is given in the second line.

For species only detected by tracks or by other means, or that were seen or heard only in the count period but not on the count day, no numbers of individuals are given in Table 1. Species detected only by tracks are indicated by 't' in the table; those detected only by other means are indicated as follows: dead animals: 'm', more clearly identifiable chewing or digging: 'd', dens or lodges: 'L', and by smell: 's.' Species detected by any means during the count period, but not on the count day, are indicated by 'c' in the table. These additional species are tallied in lines 3, 4, and 5 at the bottom of the table. If a mammal is reported as member of a species group (e.g., mouse species, deer species), it is counted as a species only if no other species in this group has been definitely recorded. The columns at the end of the table give totals for each species.



Red fox (*Vulpes vulpes*).

Christian Artuso

Table 1-1. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	1	2	3	4	5	6	7	8	9	10	11	12	13
	Archerwill, 15 Dec 2010	Avonlea, 21 Dec 2010	Bangor	Biggar, 27 Dec 2010	Birch Hills, 20 Dec 2010	Broadview, 26 Dec 2010	Bromhead, 2 Jan 2011	Cabri, 4 Jan 2011	Candle Lake, 30 Dec 2010	Cater, 1 Jan 2011	Christopher Lake, 17 Dec 2010	Churchbridge, 23 Dec 2010	Clark's Crossing, 18 Dec 2010
SPECIES													
Shrew species									t				
Eastern Cottontail													
Nuttall's Cottontail													
Snowshoe Hare	c	1		t	t	1			3	t	t		t
White-tailed Jack Rabbit	1	c	4	t		t	1	t				t	1
Richardson's Ground Squirrel													
Eastern Grey Squirrel													
Eastern Fox Squirrel		3				2							
American Red Squirrel	4				12	5			6	1	2	5	1
Northern Flying-Squirrel													
Northern Pocket Gopher													
American Beaver						L			L	L		L	
Deer Mouse						t			t				
Muskrat						L				L			
Gapper's Red-Backed Vole													
Meadow Vole													
Vole species				t	t	t			t				
House Mouse													
Mouse species	t				t			t	t				
American Porcupine	t		7	c		1							
Coyote	t	3	6	1	4	2	2	t	t			1	4
Gray Wolf									t				
Red Fox			1		t	3	1				t	3	1
Raccoon					t								
American Marten									t				
Fisher									t				
Ermine					t	t			t				
Long-tailed Weasel				2		t			t	m		t	
Least Weasel						t			t				
Weasel species	t												
American Mink						t			t				
American Badger			d		1							L	
Striped Skunk					t	t				s			
River Otter									t				
Bobcat						t							
Canada Lynx									t				
Mule Deer		32		46						5		1	
White-tailed Deer	7	165	104	11	1	6	57		35	16	2	11	11
Deer species					t	t		t					t
Moose	c			c		t	1		2	c			
Elk	c												
Pronghorn		54											
Totals seen/heard on count day	12	258	122	60	18	20	62	0	46	22	4	21	18
Total species seen/heard	3	6	5	4	4	7	5	0	4	3	2	5	5
Total species recorded by tracks	4	0	0	3	8	11	0	4	14	1	2	2	2
Total species otherwise recorded	0	0	1	0	0	2	0	0	1	4	0	2	0
Species recorded count period	3	1	0	2	0	0	0	0	0	1	0	0	0
Total species count period and day	10	7	6	9	11	19	5	4	19	9	4	9	6

Table 1-2. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	14	15	16	17	18	19	20	21	22	23	24	25	26
	Codette Lake, 1 Jan 2011	Cold Lake, 25 Dec 2010	Coronach, 4 Jan 2011	Craven, 18 Dec 2010	Creighton, 1 Jan 2011	Crooked Lake, 24 Dec 2010	Crooked River, 22 Dec 2010	Cypress Hills P.P., 30 Dec 2010	Denholm, 25 Dec 2010	Eastend, 4 Jan 2011	Edenwold, 27 Dec 2010	Endeavour, 26 Dec 2010	Estevan, 31 Dec 2010
SPECIES													
Shrew species				t									
Eastern Cottontail													1
Nuttall's Cottontail										3			
Snowshoe Hare	2	t		t	t	t			1			t	
White-tailed Jack Rabbit										t			1
Richardson's Ground Squirrel													
Eastern Grey Squirrel				3									
Eastern Fox Squirrel				2							1		4
American Red Squirrel	9	3		4	5	5	3	5	c			2	
Northern Flying-Squirrel									1				
Northern Pocket Gopher									d				
American Beaver						L			L				
Deer Mouse	t			t	t					t			
Muskrat						1							1
Gapper's Red-Backed Vole									1				
Meadow Vole				1								1	
Vole species	t			t	1								t
House Mouse													
Mouse species			t										
American Porcupine				1				1	t		2	t	3
Coyote	4	1	t	5	t			3	2	13	5	1	2
Gray Wolf													
Red Fox	t			2	t	1				t			
Raccoon													
American Marten													
Fisher													
Ermine	t												
Long-tailed Weasel	t				t				c				
Least Weasel				t									
Weasel species				t						t			
American Mink										t			
American Badger						d				1			
Striped Skunk													
River Otter					t								
Bobcat													
Canada Lynx													
Mule Deer				29				8	4	141		1	73
White-tailed Deer	6	1	16	126		7	t	15	c	34		6	14
Deer species	t	t											
Moose					t		c	1	c	1		3	
Elk	t												
Pronghorn													
Totals seen/heard on count day	21	5	16	173	6	14	3	33	9	193	8	14	99
Total species seen/heard	4	3	1	9	2	4	1	6	5	6	3	6	8
Total species recorded by tracks	7	2	2	5	7	1	1	0	1	5	0	2	1
Total species otherwise recorded	0	0	0	0	0	2	0	0	2	0	0	0	0
Species recorded count period	0	0	0	0	0	0	1	0	4	0	0	0	0
Total species count period and day	10	4	3	13	9	7	3	6	12	11	3	8	9

Table 1-3. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	27	28	29	30	31	33	34	36	37	38	39	40	41
	Estuary North, 5 Jan 2011	Fenton, 21 Dec 2010	Fort Qu'appelle, 16 Dec 2010	Gardiner Dam, 20 Dec 2010	Good Spirit Lake, 21 Dec 2010	Harris, 16 Dec 2010	Hazlet, 27 Dec 2010	Indian Head, 30 Dec 2010	Kelvington, 2 Jan 2011	Kenaston, 18 Dec 2010	Kenosee Lake, 18 Dec 2010	Ketchen, 26 Dec 2010	Kilwiining, 28 Dec 2010
SPECIES													
Shrew species									t			c	
Eastern Cottontail													
Nuttall's Cottontail	1			3			t						
Snowshoe Hare		t	1	t	t	t		5	t	t	t		
White-tailed Jack Rabbit	1			1	1	t	t	3	c				t
Richardson's Ground Squirrel													
Eastern Grey Squirrel													
Eastern Fox Squirrel								5					
American Red Squirrel		4	18		3			19	3		3	2	6
Northern Flying-Squirrel													
Northern Pocket Gopher													
American Beaver					L			2		L	L	L	
Deer Mouse										t			
Muskrat			1										
Gapper's Red-Backed Vole													
Meadow Vole						1							
Vole species	6			t								c	
House Mouse			c						t				
Mouse species				t		t			t				
American Porcupine	1		1	4	t				c	1			m
Coyote	1	t	2	10	t	t		9	c	t	1		1
Gray Wolf													
Red Fox		t	c	2				1	3	t			
Raccoon								2	t	t			
American Marten													
Fisher													t
Ermine		t								t			
Long-tailed Weasel								3	t				
Least Weasel									t				
Weasel species					t								
American Mink			c					2					
American Badger				1		d	d			L			
Striped Skunk									s	L			
River Otter													
Bobcat													
Canada Lynx													
Mule Deer	66		6	43		24		1	33	3			
White-tailed Deer	24	2	9	166	16	12		42	18	36	18		3
Deer species												t	
Moose	9			1	4	t	3		t	t	1	t	t
Elk											2	t	
Pronghorn						12	67						
Totals seen/heard on count day	109	6	38	231	24	49	70	94	57	40	25	2	10
Total species seen/heard	8	2	7	9	4	4	2	12	4	3	5	1	3
Total species recorded by tracks	0	4	0	3	4	5	2	0	7	7	1	3	3
Total species otherwise recorded	0	0	0	0	1	1	1	0	1	3	1	1	1
Species recorded count period	0	0	3	0	0	0	0	0	3	0	0	2	0
Total species count period and day	8	6	10	12	9	9	5	12	15	13	7	7	7

Table 1-4. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	42	43	44	45	46	47	48	49	50	51	52	53	54
	Kindersley North, 26 Dec 2010	Kinistino, 19 Dec 2010	Kinloch, 3 Jan 2011	Kyle, 23 Dec 2010	La Ronge, 5 Jan 2011	LMNWA-Nokomis, 18 Dec 2010	Leader North, 26 Dec 2010	Love-Torch River, 26 Dec 2010	Luseland, 27 Dec 2010	Macdowall, 30 Dec 2010	Meadow Lake, 26 Dec 2010	Moose Jaw, 16 Dec 2010	Moose Mountain P.P., 3 Jan 2011
SPECIES													
Shrew species								1					
Eastern Cottontail													
Nuttall's Cottontail				1			3						
Snowshoe Hare	1		1			1		t			t		
White-tailed Jack Rabbit				2		2	2	t				t	t
Richardson's Ground Squirrel													
Eastern Grey Squirrel													
Eastern Fox Squirrel												t	
American Red Squirrel		2	4		2			13			L		3
Northern Flying-Squirrel													
Northern Pocket Gopher								d					
American Beaver			L										
Deer Mouse		t		1									
Muskrat						L				L			
Gapper's Red-Backed Vole													
Meadow Vole		t				t		1					
Vole species													
House Mouse													
Mouse species	t						3						
American Porcupine			m	c			3	t		m	t		
Coyote	1		t	t		1	2	1	2		1		
Gray Wolf								t					
Red Fox				c			1	c					
Raccoon													
American Marten													
Fisher													
Ermine													
Long-tailed Weasel								1					
Least Weasel			1										
Weasel species						t							
American Mink			t					t					
American Badger													
Striped Skunk													
River Otter													
Bobcat													
Canada Lynx													
Mule Deer	5		1	c		3	12		5				
White-tailed Deer		8	47	12		43	47	21			8		6
Deer species													
Moose			t	c			1	c	4				1
Elk			c					t					
Pronghorn	c						35						
Totals seen/heard on count day	7	10	54	16	2	50	109	38	11	0	9	0	10
Total species seen/heard	3	2	5	4	1	5	10	6	3	0	2	0	3
Total species recorded by tracks	1	2	3	1	0	2	0	6	0	0	2	2	1
Total species otherwise recorded	0	0	2	0	0	1	0	1	0	2	1	0	0
Species recorded count period	1	0	1	4	0	0	0	2	0	0	0	0	0
Total species count period and day	5	4	11	9	1	8	10	15	3	2	5	2	4

Table 1-5. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	55	56	57	58	59	60	61	62	63	64	65	66	67
	Morse, 18 Dec 2010	Nipawin, 28 Dec 2010	Nisbet Forest NW, 20 Dec 2010	Nisbet Forest West, 1 Jan 2011	Odessa, 29 Dec 2010	Outlook, 26 Dec 2010	Pierce Lake, 6 Jan 2011	Pike Lake, 3 Jan 2011	Prince Albert, 19 Dec 2010	Qu'Aappelle, 30 Dec 2010	Qu'Appelle Dam, 19 Dec 2010	Regina, 27 Dec 2010	Rouleau, 3 Jan 2011
SPECIES													
Shrew species			t					t					
Eastern Cottontail													
Nuttall's Cottontail	t										t		
Snowshoe Hare							t	t	t	t	t	1	
White-tailed Jack Rabbit	5				4	1		1	t	t		22	1
Richardson's Ground Squirrel			t										
Eastern Grey Squirrel												15	
Eastern Fox Squirrel												46	3
American Red Squirrel		2		1				12	1		2	1	
Northern Flying-Squirrel													
Northern Pocket Gopher													
American Beaver									2			L	
Deer Mouse			t					t				1	
Muskrat									2			L	
Gapper's Red-Backed Vole													
Meadow Vole								t				2	
Vole species	1		t						t				
House Mouse													
Mouse species								t	t				
American Porcupine						1		3	t			t	
Coyote	5	1	t		2		1	3	t		9	12	
Gray Wolf													
Red Fox	14							t	1			1	d
Raccoon													
American Marten													
Fisher													
Ermine									t	1			
Long-tailed Weasel	1							t			2		
Least Weasel								t					
Weasel species												t	t
American Mink												1	
American Badger	d										1		
Striped Skunk													
River Otter							t						
Bobcat													
Canada Lynx													
Mule Deer	19							3			44		
White-tailed Deer	139	4	t		76		t	26	3		40	7	
Deer species								t					
Moose	1							1			1		8
Elk		c											
Pronghorn													
Totals seen/heard on count day	185	7	0	1	82	2	1	49	9	3	99	109	12
Total species seen/heard	8	3	0	1	3	2	1	7	5	1	7	11	3
Total species recorded by tracks	1	0	6	0	0	0	3	8	6	2	2	2	1
Total species otherwise recorded	1	0	0	0	0	0	0	0	0	0	0	2	1
Species recorded count period	0	1	0	0	0	0	0	0	0	0	0	0	0
Total species count period and day	10	4	6	1	3	2	4	14	11	3	9	15	5

Table 1-6. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	68	69	70	71	72	73	74	75	76	77	78	79	80
	Round Lake (Q.V.), 22 Dec 2010	Saltcoats, 3 Jan 2011	Sask. Landing P.P., 28 Dec 2010	Sask. River Forks, 18 Dec 2010	Saskatoon, 26 Dec 2010	Sawyer Lake, 1 Jan 2011	Shamrock, 29 Dec 2010	Sintaluta, 30 Dec 2010	Snowden, 4 Jan 2011	Spinney Hill, 16 Dec 2010	Squaw Rapids, 1 Jan 2011	Swift Current, 18 Dec 2010	Togo, 5 Jan 2011
SPECIES													
Shrew species					t	c							
Eastern Cottontail	2												
Nuttall's Cottontail			7									3	
Snowshoe Hare	t	t		t	t	c		2	t	t	t		t
White-tailed Jack Rabbit	t	c		t	5		15		2	t		3	
Richardson's Ground Squirrel													
Eastern Grey Squirrel					1							7	
Eastern Fox Squirrel						c		10					
American Red Squirrel	4	2		3	10				6	6	6		2
Northern Flying-Squirrel						m							
Northern Pocket Gopher													
American Beaver	L					L							
Deer Mouse				t	t				t				
Muskrat										m			
Gapper's Red-Backed Vole													t
Meadow Vole									t				
Vole species	t		1	t	1		1						
House Mouse													
Mouse species			t	t	t								
American Porcupine	1	1	1	t	1	t		1	c				
Coyote	1	7	7		7	1	4	9		1	t	t	4
Gray Wolf				t							t		
Red Fox	1		1		3	t	1	1	1		t		
Raccoon													
American Marten													t
Fisher				t		t							
Ermine				t		t							
Long-tailed Weasel		c		t	2								
Least Weasel					t						t		
Weasel species	t												m
American Mink		c			t	t							
American Badger	d				L		d						
Striped Skunk		s			s	t	s						
River Otter						t							
Bobcat													
Canada Lynx													
Mule Deer	6		42	1	26		39	3		7		25	
White-tailed Deer	21	84	18		25	c	28	28	5	1	1	79	10
Deer species				t	4							44	
Moose			c	t		1							
Elk				t		c							
Pronghorn													
Totals seen/heard on count day	36	94	77	4	85	2	88	54	14	15	7	161	16
Total species seen/heard	7	4	7	2	10	2	6	7	4	4	2	5	3
Total species recorded by tracks	4	1	1	12	6	7	0	0	3	2	5	1	3
Total species otherwise recorded	2	1	0	0	2	2	2	0	0	1	0	0	1
Species recorded count period	0	3	1	0	0	5	0	0	1	0	0	0	0
Total species count period and day	13	9	9	13	17	16	8	7	8	7	7	12	7

Table 1-7. 38th Saskatchewan Christmas Mammal Count - 2010.

Map number	81	82	83	84	85								
	Weyburn, 18 Dec 2010	White Bear, 25 Dec 2010	Whitewood, 28 Dec 2010	Wingard-Fort Carlton, 29 Dec 2010	Yorkton, 29 Dec 2010	# individuals seen/heard count day	# Counts seen/heard	# Counts recorded as tracks	# Counts recorded as other	# Counts, count period	# Counts, count period & count day	High count	% Counts seen/heard
SPECIES													
Shrew species						1	1	6	0	2	9	1	1.2
Eastern Cottontail						3	2	0	0	0	2	2	2.5
Nuttall's Cottontail						21	7	3	0	0	10	7	8.6
Snowshoe Hare			6	t		26	13	33	0	1	47	6	16.0
White-tailed Jack Rabbit			c		t	78	21	17	0	4	42	22	25.9
Richardson's Ground Squirrel						0	0	1	0	0	1	0	0.0
Eastern Grey Squirrel						26	4	0	0	0	4	15	4.9
Eastern Fox Squirrel	4		1			81	11	1	0	1	13	46	13.6
American Red Squirrel			4	1	2	215	45	0	1	1	47	19	55.6
Northern Flying-Squirrel						1	1	0	1	0	2	1	1.2
Northern Pocket Gopher						0	0	0	2	0	2	0	0.0
American Beaver			L	L		4	2	0	16	0	18	2	2.5
Deer Mouse						2	2	13	0	0	15	1	2.5
Muskrat						5	4	0	6	0	10	2	4.9
Gapper's Red-Backed Vole						1	1	1	0	0	2	1	1.2
Meadow Vole						6	5	4	0	0	9	2	6.2
Vole species						11	6	12	0	1	19	6	7.4
House Mouse						0	0	1	0	1	2	0	0.0
Mouse species						3	1	13	0	0	14	3	1.2
American Porcupine			c	c	t	34	18	10	3	6	37	7	22.2
Coyote	1	2	2	t	2	172	49	15	0	1	65	13	60.5
Gray Wolf						0	0	4	0	0	4	0	0.0
Red Fox	1		1			45	22	10	1	3	36	14	27.2
Raccoon	10					12	2	3	0	0	5	10	2.5
American Marten						0	0	2	0	0	2	0	0.0
Fisher						0	0	4	0	0	4	0	0.0
Ermine						1	1	9	0	0	10	1	1.2
Long-tailed Weasel						11	6	8	1	2	17	3	7.4
Least Weasel				t		1	1	8	0	0	9	1	1.2
Weasel species			t	t	1	1	1	9	1	0	11	1	1.2
American Mink						3	2	7	0	2	11	2	2.5
American Badger			d			4	4	0	11	0	15	1	4.9
Striped Skunk				c		0	0	3	6	1	10	0	0.0
River Otter						0	0	4	0	0	4	0	0.0
Bobcat						0	0	1	0	0	1	0	0.0
Canada Lynx						0	0	1	0	0	1	0	0.0
Mule Deer	35	8		5		805	36	0	0	1	37	141	44.4
White-tailed Deer			20	c		1797	58	3	0	3	64	166	71.6
Deer species				t	3	51	3	10	0	0	13	44	3.7
Moose			c			44	18	9	0	8	35	9	22.2
Elk			t			2	1	5	0	3	9	2	1.2
Pronghorn						168	4	0	0	1	5	67	4.9
Totals seen/heard on count day	51	10	34	6	8	3635							
Total species seen/heard	5	2	6	2	4		30						
Total species recorded by tracks	0	0	2	4	2			27					
Total species otherwise recorded	0	0	2	1	0				8				
Species recorded count period	0	0	3	3	0					16			
Total species count period and day	5	2	13	9	6						36		

A NEW DRAGONFLY FOR MANITOBA – PRINCE BASKETTAIL

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This article documents two records, substantiated by photographs and specimens, of prince baskettail (*Epitheca princeps*), in extreme southeastern Manitoba. This dragonfly has an extensive range in eastern North America, with the northwestern range limit approaching the southeastern corner of Manitoba, but there are apparently no previous records for the province.¹⁻³ Observations are described below, with further details in Table 1.

Seven Manitoba insect enthusiasts met at East Braintree (115 km ESE of Winnipeg) on 12 July 2009 to search for dragonflies and butterflies. At one stop along Provincial Road (PR) 308, about 12 km SSE of East Braintree (Table

1), P.T. noticed an unfamiliar dragonfly perched on a dead tamarack (*Larix laricina*) twig. The prominent spot pattern on the wings suggested female twelve-spotted skimmer (*Libellula pulchella*) or common whitetail (*Plathemis lydia*), but L.d.M. identified it as a prince baskettail, based on the following features: relatively large size; long and slender abdomen held in an upcurved posture; colour pattern, especially the lack of stripes on the thorax.^{1,2,4} The dragonfly remained perched long enough to be photographed by several members of the group (Fig. 1 and front cover). The cerci and epiproct (abdominal appendages) indicated it was a male. It had brown eyes, a feature of immature males. As with other corduliid

Table 1. Coordinates of prince baskettail records for Manitoba and nearby areas of Minnesota and Ontario.

Date	Observer(s)	Jurisdiction	Latitude (° N)	Longitude (° W)	Comments
10 July 2004	L. Barber	Manitoba	49.73	95.18	Lyons Lake; see text
12 July 2009	P. Taylor, L. de March et al.	Manitoba	49.5210	95.5617	MB P.R. 308; see text
Unknown	Unknown	Minnesota (Beltrami County)	Approx. 48.0	Approx. 94.9	Ref. 5
4 June 1999	H. Davies, J.M. Duncan	Ontario (Kenora District)	49.7005	94.3604	C.D. Jones; Ref. 6; Canadian National Collection of Insects



Figure 1. Prince baskettail near Manitoba Provincial Road 308, 12 July 2009 (lateral view).
Larry de March

dragonflies (emeralds), male prince baskettails' eyes turn green at sexual maturity.

This proved to be the second record of prince baskettail in Manitoba, the first

being a confirmed breeding record very close to the provincial boundary. Lance Barber had collected two females (one found dead), six exuviae (empty larval cases; Fig. 2), and one dead larva on 10 July 2004 at Lyons Lake, which is on the Trans-Canada Highway 1.5 km W of the Manitoba–Ontario boundary and about 36 km NE of the PR 308 locality (M. Hughes, pers. comm.). Hughes confirmed the identities of all specimens, which are preserved in the Manitoba Conservation Data Centre collection.

Habitat for the prince baskettail can be “moderate-sized streams to fair-sized rivers, usually slow-flowing, and large ponds and lakes... more at lakes in northern part of range”.¹ Lyons Lake is a typical, small shield lake surrounded by mixed forest. The habitat along PR 308 was low-lying, open-canopy forest, primarily black spruce (*Picea mariana*) and tamarack, with a well-filled drainage channel and many drowned trees on one side (Fig. 3). The nearest potential larval habitat appeared to be the channel, and



Figure 2. Prince baskettail exuvia collected at Lyons Lake, MB, on 10 July 2004.
Larry de March



Figure 3. Drainage channel and forest habitat at prince baskettail locality near Manitoba Provincial Road 308, 12 July 2009.
Larry de March

the nearest larger water body is Birch Lake, 2 km to the NW.

The two nearest previous records to Manitoba are in Beltrami County, Minnesota, and near the north shore of Lake of the Woods east of Kenora, Ontario (Table 1). These are respectively about 174 km S and 89 km E by ENE of the PR 308 locality.^{5,6} There is a cluster of records farther SE of Kenora in the Rainy River district of Ontario.⁶ The Manitoba records, though adding to the provincial list, represent only a modest range extension. Given the limited exploration of this region by naturalists, local populations could be long-standing and may not necessarily represent active range expansion. This is one of several dragonfly species that reach their northwestern range limits in or near extreme southeastern Manitoba; the region merits further exploration.

Acknowledgements

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Dennis Paulson, Richard Rowe, and Dianne Rowse for helpful correspondence. Co-observers on the 12 July 2009 outing were Alfred Aug, Deanna Dodgson, Lorne Klassen, Nella Schmidt, and Reto Zach.

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UNUSUAL MORPHOLOGY AMONG COMMON MOONWORTS (*BOTRYCHIUM LUNARIA*) FROM CHURCHILL, MANITOBA

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Although we no longer believe that moonworts hold magical properties after being stepped upon by horses under the light of the full moon, this group of plants still has many intriguing features to draw our attention.^{1,2,3} The moonworts (*Botrychium* spp.) are a group of very unusual ferns in that each plant produces only one leaf (frond) per year, and this

leaf has a fertile (sporophore) and a sterile (trophophore) portion (Fig. 1).¹⁻⁵ The pinnately compound trophophore of the common moonwort (*B. lunaria*) has distinctive fan-shaped lobes (pinnae). In Manitoba, this species is most numerous on moist sand and gravel substrates near Churchill, but is rare elsewhere in the province (Fig. 2).⁶

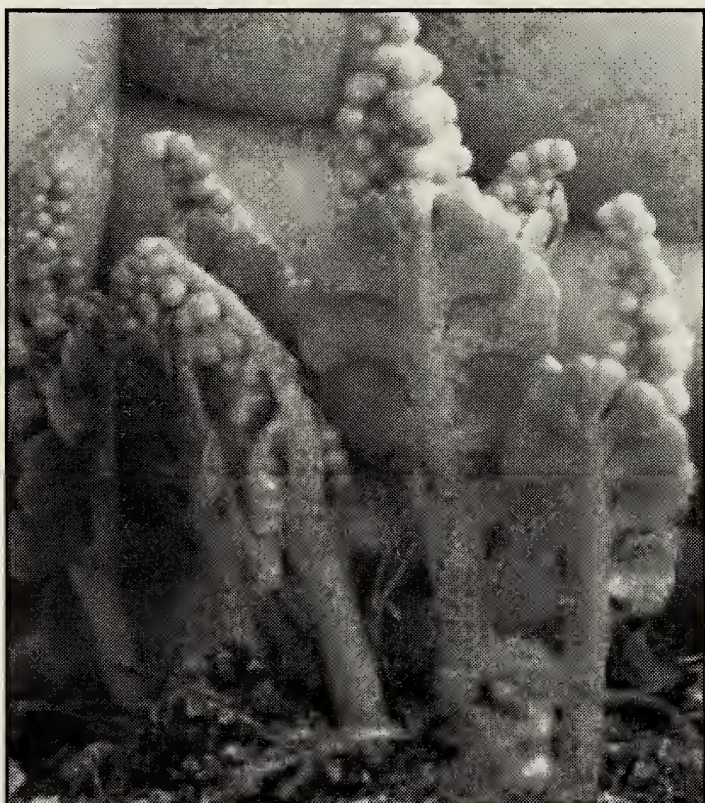


Figure 1. Common moonworts with “normal” morphologies. Each frond has a single sterile and a single fertile portion.
Richard J. Staniforth

In July 2007, an arbitrary collection of 35 fronds was made during field work at various sites within 32 km of Churchill. This taxon is usually well known for its consistent morphological structure;⁵ however, the examination of this collection in the laboratory at a later date revealed some surprising variants (Fig. 3, see inside back cover, bottom). Seven specimens (20%) had sporangia on the periphery of one or both lower pinnae in addition to those of the sporophore itself. In most cases, the fertile lower pinnae of the trophophore were pinnatifidly lobed. In 12 specimens (34%), one or both lower pinnae were entirely lacking and replaced by additional sporophores.

Two specimens (6%) from Dene Village, south of Churchill, each possessed two



Figure 2. Common moonworts are frequent in disused sand/gravel quarries like this one on an esker ridge 7 km SE of Churchill, Manitoba, where the population was estimated at 2000 fronds.
Richard J. Staniforth

trophophores instead of a single one. These were paler than in “normal” forms of the species, and their sporangia were considerably smaller.

It appears that morphological variation is not only found in Manitoba populations; there are previous reports of similar variants in this species. For instance, in 1909, Benson found Swiss plants with sporangia on the sterile portion of the fronds.⁷ Recently, Farrar indicated that sporangia may be occasionally produced on the trophophores of any moonwort species.⁴ Chrysler used knowledge of similar variants in *B. lanuginosum* to develop a hypothesis regarding the evolutionary origin of fertile and sterile components in the frond structure and that this may explain their interchangeability.^{8,9}

What is the cause of this variation? Are these plants showing some reversion to an ancestral form, or are these variants simply a result of damage to growing apices by external forces (P. Friesen, unpublished)? There is certainly room for further research to find an answer that would explain the mysterious morphology of these magical plants.

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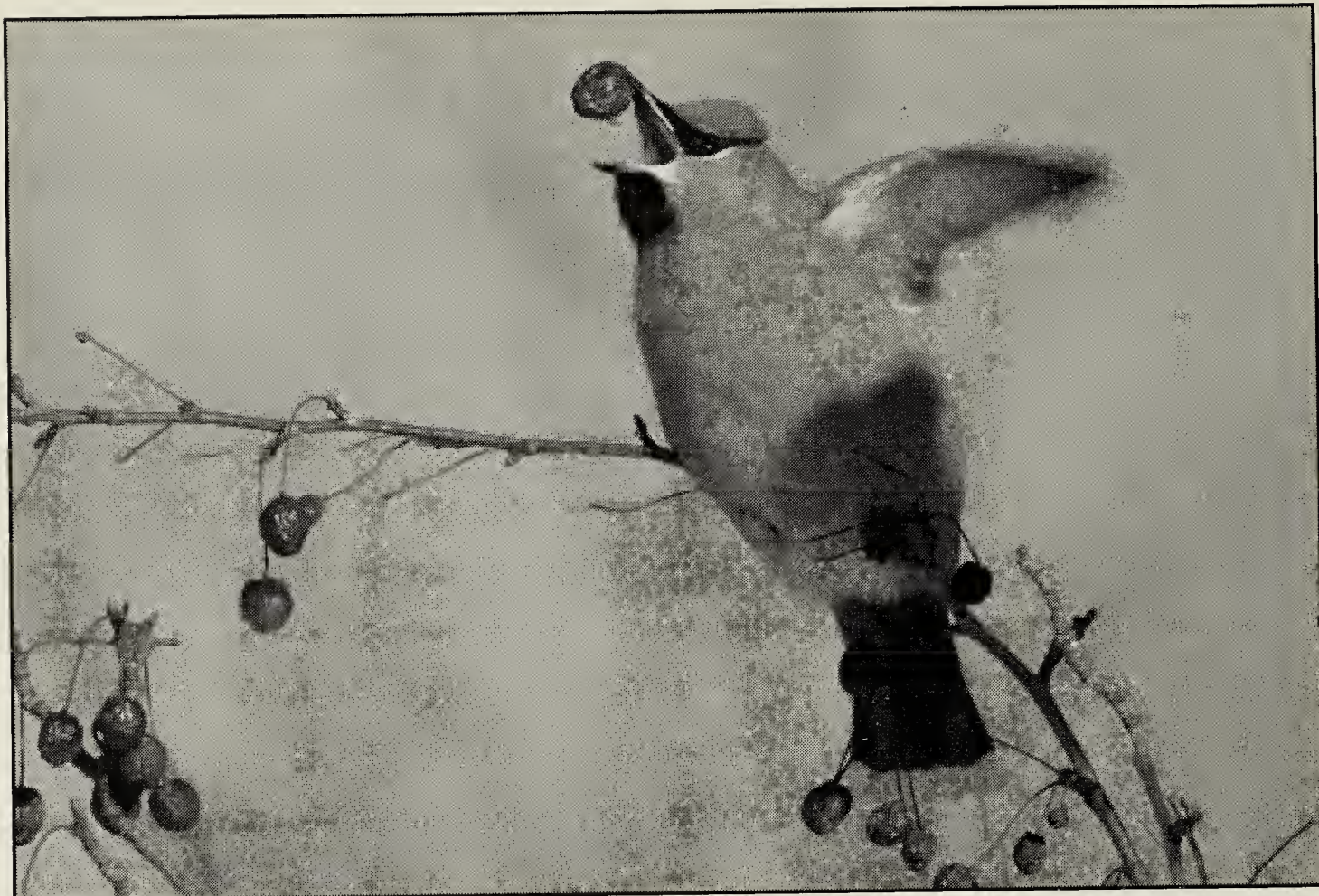
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Bohemian waxwing (Bombycilla garrulus).

Christian Artuso



DISBURSEMENT

Where blackish-blue
ripe saskatoons
once clustered, hang
a last few leaves
suspended now—
like coins—without
an obvious
attachment, some
of copper hue
and others, un-
dersided, of
a creamy tan.

-Victor C. Friesen

NOTES AND LETTERS

YELLOW-BILLED CUCKOO RECORD FOR SASKATCHEWAN

At about 14:40 h on 18 September 2010, I noticed a medium-sized bird with an unusually long tail as it flew into a chokecherry tree in our back yard in Saskatoon, SK. Observed through binoculars, the bird displayed a basic grey-brown over white colouration with rufous primaries, distinct white spots on a black undertail, yellow eye-ring, and yellow lower mandible. I was joined by my son, Andy, who brought along a field guide and a camera. Based on our observations, we identified the bird as a yellow-billed cuckoo (*Coccyzus americanus*; Fig. 1 and see inside back cover, top).

We watched and photographed the bird for approximately 15 minutes. While appearing calm, the cuckoo lived up to its shy reputation as it slowly but deliberately moved higher into the overhanging branches of our neighbour's Manitoba maple, always placing itself in the best position so as not to be seen by us. The cuckoo then flew higher into a nearby

poplar tree and was eventually lost from sight. The area was searched by others but the cuckoo was not found again.

The normal range of the yellow-billed cuckoo includes most of the central and eastern United States and southern regions of eastern Canada from Ontario to New Brunswick.¹ The bird is considered an irregular summer visitor to Saskatchewan.

Previous sighting and/or auditory records for Saskatchewan include: Weyburn, summer 1966 (R. Kreba, pers. comm.); Estevan, 8 June 1974;² Battle Creek, summer 1979 (W.C. Harris, pers. comm.); Bromhead, 15 August 1982 and 12 June 1983;³ Regina, 28 May and 6 July 1987;⁴ Roche Percée, 22 Jul 1988;⁵ and Arcola, June 2007.

Our sighting in Saskatoon is the latest and northernmost to date in the province. The photographs provide the documentary evidence required to move the species from the hypothetical to the confirmed Saskatchewan list of birds.

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- Craig D.C. Salisbury, 2232 Ewart Avenue, Saskatoon, SK, S7J 1Y2



Figure 1. Yellow-billed cuckoo. Craig D.C. Salisbury

CUCULUS

"Say goodbye to the cuckoo. The bird is disappearing from Britain at a scarcely conceivable rate."

"Sumer is icumen in,
Lhude sing cuccu!"

There's something missing here. Trees in full leaf,
the sun warm on your back, watch swallows weave,
hear wedding bells and rooks. Our wandering voice,
rich buttery descending minor thirds,
herald of spring, has not turned up. Till now
the clout of instinct's pulled them through, stealth craft
above the turning world. They've failed this year,
the silence deafening, perhaps for good.
You're ten, birds' nesting in the wood; crouch low,
read shadows, x rays of the undergrowth.
Hedge sparrow's clutch, one larger than the rest:
eyes everywhere, cuckold. Later you stir
the foetal clot to blow the evidence.
Takes pride of place in your old biscuit box.

- *Peter Branson*



*Olive-backed pocket mouse
(Perognathus fasciatus) on lichen.
Ray Poulin*

THREE SUCCESSFUL BROODS OF THE MOURNING DOVE IN ONE SEASON IN REGINA, SASKATCHEWAN

In 2009, a pair of mourning doves (*Zenaida macroura*) nested in a Manitoba maple (*Acer negundo*) tree next to our driveway, only 4.3 m from the railings of the steps leading into our house, in Regina, SK. This allowed me to observe them daily. I hoped to confirm some observations reported in the literature and to make new ones on the behavior of breeding mourning doves.

Mourning doves are beautiful, interesting, and now common birds in Saskatchewan. Historically, they were rare in the prairies, being restricted to river valleys.^{1,2,3} However, with human settlement, their population increased.² Males and females form lifelong bonds and they nest in deciduous and evergreen trees,⁴ on the ground near trees,^{5,6} in cultivated fields,⁷ and in highway ditches.⁸ The males select the nest site and supply the nesting material, and the female builds the nest.⁴ Normally a pair produces two broods, but there may be four, usually with two eggs each, in southern Manitoba.⁴ One of the parents sits on the nest at all times with the male from about 08:30 until 16:30 h, when the female takes over.⁹ The incubation period is 14 days, and the young, called squabs, may leave the nest at 12 to 14 days of age. They depend on the parents for food until over 20 days of age.^{5,10} Both males and females feed the young, first by regurgitating digested food (called "pigeon's milk", originating from the crop wall) and then seeds.^{4,5} Doves are able to drink water in a continuous draught.⁵ Mourning doves are prodigious seed eaters. They may ingest 20 to 50 seeds per minute while feeding.⁵ Niven found an injured bird with the crop full of wild buckwheat and wild mustard seeds.¹¹ Predators other than humans include

hawks, owls, and cats.⁵ Mourning doves migrate south for the winter but are occasionally recorded in Christmas Bird Counts.¹²

On 25 May 2009, a pair began building their nest 3.45 m off the ground (Table 1). It was constructed on a large, nearly horizontal branch, next to the tree's main trunk, and flanked on the west side by an unoccupied nesting box. Initially, the doves seemed to be active at the nest site only in the morning. I was not able to distinguish the male from the female due to their secretive behaviour and the densely shaded nest. I did not approach closely, for fear of disturbing them. (As our neighbourhood is populated with freely roaming cats that could easily climb up to the nest, I set up my cat trap near the nesting tree and caught one each during the following two nights. They were turned over to the Animal Control unit of the city of Regina.) From 28 May on, one parent was sitting on the nest at all times except as noted later. On some days, I observed the 'change of guard' at about 16:30 h. At 07:30 h on 13 June, I heard cooing and intensive cooing on 20 June about 08:00 h. On the same day, I saw two squabs in the nest and heard cooing with a higher and a lower pitch. It was probably a squab that cooed at the higher pitch.⁵ On 24 June, one young ventured out of the nest for a short while and at 19:25 h, no adult was in the nest. However, by 8:30 h one adult was back on the nest. The young left the nest on 25 or 26 June.

On 1 July, again one adult was sitting on the nest. On 22 July, I confirmed that a second clutch had hatched; at least one squab was vigorously fed by an adult and on the next day I saw 2 squabs. On 25 July, there was no adult on the nest for at

Table 1. Details of 3 broods of mourning dove observed in the same nest in Regina, SK, in 2010.

Brood	Nest building	Adult continuously on nest	Squab(s) seen on nest	Squabs left nest
1	25 May	28 May	20 June	25 or 26 June
2	Not observed	1 July	22 July	27 July
3	29 July	29 July	26 August	27 August

least 2 hours. In the afternoon, the young ventured out of the nest on the big, almost horizontal branch. On 27 July, they had flown the coop. I saw one young on the ground, only 14 m away from the nesting tree.

On the next day, one adult came with nesting material in its beak, and on 29 July, an adult was sitting on the nest again. On 22 August, I observed two squabs. On 26 August, the parents were absent from the nest quite often, and on the next day the squabs moved out of the nest onto the horizontal branch next to the nest where they were fed by a softly cooing parent. On 27 August, the two squabs had left the nest and were observed on the ground where the squab of the previous brood had sat. I observed them daily at this site, first sitting close together, then more apart every day, until 4 September. On 5 September, they flew into nearby bushes, and by 7 September they had left the area. No doves used the nest in 2010.

The mourning doves started breeding in late May, and the young of the third and final brood fledged in late August. Late May is the most common time in spring when nests with eggs are found in the Saskatoon area, and elsewhere in Saskatchewan, nests with eggs are found until mid-September.¹³ Each brood took almost exactly one month from the time an adult sat continuously on the nest until the young left the nest. This agrees

with reports in the literature: 14 days of incubation and the young leaving the nest at 12 to 14 days of age.⁵ As the young do not become independent until they are about 20 days old,⁵ the parents started the next brood while still caring for the previous one. On the days just before the squabs fledged, they were occasionally unguarded by the parents, a behaviour I did not find reported in the literature. Our mourning doves were very quiet during the nesting period, which confirms other observations,⁴ but they cooed frequently in the mornings of the days shortly before the squabs left the nest. I did not find evidence in the literature that fledglings spend their first days on the ground. During these days, they are probably easy prey for cats. Two squabs were seen shortly before fledging in each of the three broods. Assuming 2 eggs in each, nesting success was 100% as compared to an average of about 50% in Iowa.⁵

Acknowledgements

I thank the editors and an unknown reviewer for many very helpful suggestions.

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- Diether P. Peschken, 2900 Rae Street, Regina, SK, S4S 1R5, E-mail: <peschken@sasktel.net>



Nature is, after all, the only book that offers important content on every page.

- Johann Wolfgang von Goethe

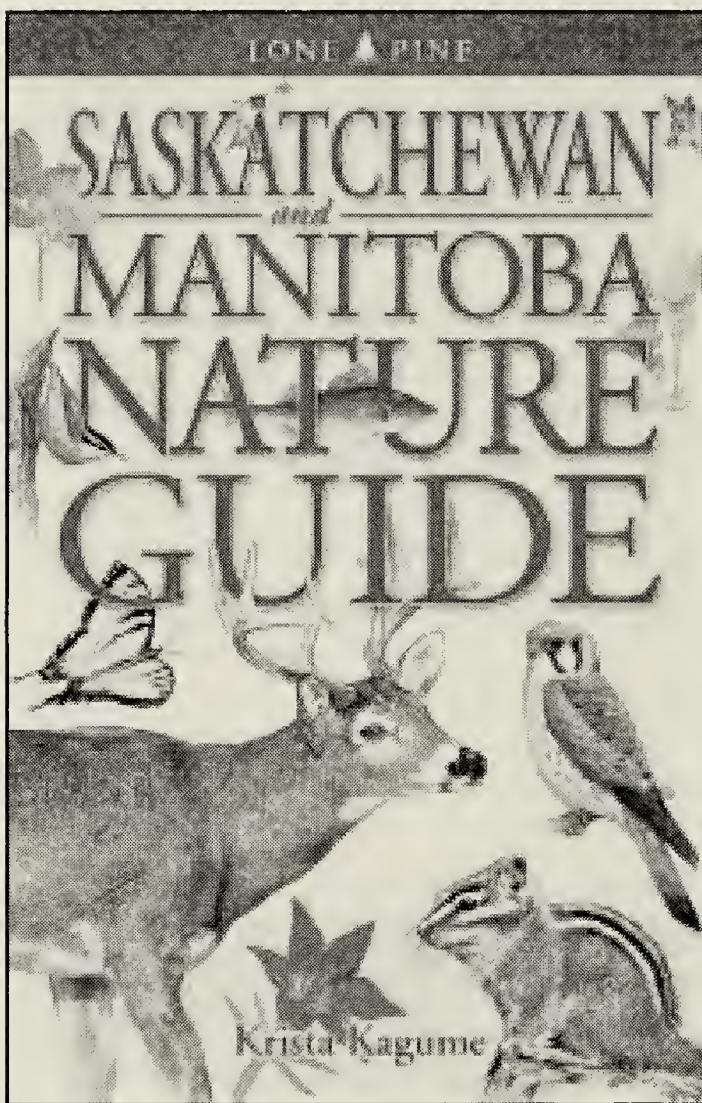


Magpie snacking on a frozen sparrow.

Nick Saunders

SASKATCHEWAN AND MANITOBA NATURE GUIDE

Krista Kagume. 2010. Lone Pine Publishing, Edmonton, AB. \$21.95 CDN. Soft cover. ISBN: 978-1-55105-601-2. 224 pp. 14.0 cm by 21.6 cm.



amazing diversity of invertebrates found in Saskatchewan and Manitoba. A larger section on invertebrates would have greatly strengthened this guide.

This volume uses the same attractive and successful species account layout used in all other recent Lone Pine Publishing wildlife guides such as *Saskatchewan Birds* and *Birds of Canada*.^{1,2} Each species account includes an accurate and attractive colour painting, physical dimensions, a short paragraph describing its natural history, the habitats, and its range in Saskatchewan and Manitoba. I found the information to be accurate, informative, and well written.

A particular strength of book is the Introduction, which includes provincial ecoregion maps and brief informative summaries of the ecoregions of Saskatchewan and Manitoba. For each province, there is also a map and a list of top wildlife viewing sites (41 in Saskatchewan and 50 in Manitoba), many of which are provincial and national parks, interpretive centres, and key wetlands. These sites were selected for their biodiversity and relative accessibility, although one overlooked site was Regina's Wascana Marsh. The author also briefly profiles 23 accessible wildlife-viewing sites in Saskatchewan and Manitoba. These summaries will be of interest to folks who are new to these two provinces. A book on all of the key wildlife viewing sites of Saskatchewan and Manitoba

The Lone Pine Saskatchewan and Manitoba Nature Guide contains species accounts for nearly 400 species that are commonly encountered in Saskatchewan and Manitoba. The author does a good job in covering mammals (68 species), birds (94 species), amphibians and reptiles (19 species), fish (24 species), trees and shrubs (54 species), and forbs, ferns and grasses (102 species). The weakest section of the guide is the section on invertebrates. Including species accounts of only 32 invertebrate species does not do justice to the

would make a useful companion to this guide.

Species in this guide can be quickly located using the Table of Contents, the detailed index in the back, the colour-coded 19-page introductory reference guide in the front of the book, a colour-coded quick reference guide on the back cover and individual chapter reference guides. I found an odd single error in the reference guide section for the trees and tall shrubs chapter, wherein some species are grouped as roses. Other reference guide sections appear to be error free.

The guide has a handy and useful glossary of ecological, botanical, and wildlife terms in the back of the book. The glossary also contains effective diagrams of external anatomies of a

bird, a fish, a flower, and an insect. After the glossary, there is a helpful one-page references/further reading section of 14 books and websites about wildlife and plants of western Canada. I detected an incomplete title for Saskatchewan Birds in one of the references.

I highly recommend this excellent introductory guide to anyone who is new to the vertebrates and plants of Saskatchewan and Manitoba.

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Reviewed by Rob Warnock, E-mail: <warnockr@accesscomm.ca>



THE COLLECTOR

My name is John and I steal wild bird's eggs.
I am no beast. I watch and wait. Each clutch
I take's stone cold, fresh made. That way the hens
should lay a second batch so nothing's spent.
Craft's in locating nests. The taking bit's
the buzz I miss and find impossible
to do without. Can't share the spoils, shards blown
bone dry. Hard evidence, like photographs,
must be concealed, of course, from prying eyes.
So these are hollow victories, hard earned.
What's left with each abortion carried out's
a barren shadow of a flawless gem:
leaves me a brittle shell soon as it's done,
dead glass craving constant replenishment.

- *Peter Branson*

IN MEMORIAM

IN MEMORIAM: REV. RONALD R. HOOPER, 1931–2010

C. Stuart Houston¹, Keith N. Roney²

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²12334 Wascana Highlands, Regina, SK, S4V 2J6



Ronald Hooper. Photograph courtesy of Royal Saskatchewan Museum

Ronald R. Hooper and his twin brother Donald were born on 28 April 1931 to Eli and Clara Belle Hooper in the Carragana Red Cross Outpost Hospital in Carragana, SK. They attended Souchez rural school, but only Ron continued his high school education, which entailed a six-mile walk twice daily from the farm to Weekes and back.

During 1951 to 1953, within a 24-km radius of their farm, the Hooper twins had identified 198 species of birds, found nests of 80 bird species, and flightless young of another 8. In 1954, when their list had grown to 206 species, it was compiled into "A preliminary list of the

birds of the Somme area" by Donald F. and Ronald R. Hooper (Contribution 3, Yorkton Natural History Society, 13 pages).

In June 1953, Stuart and Mary Houston visited the Hooper farm, 3 km east and 5 km north of Somme. Don was helping on an adjacent farm, but twin brother Ronald and sister Edna showed us their impressive museum, the result of 3 years of collecting and taxidermy, in a made-over granary. Two photographs of that museum appeared in *Blue Jay* 12(2):27 (1954). Ron and Don aimed to study "all of God's creatures"; they had been encouraged by Wallace Black, a neighbouring farmer with an interest in ornithology, but were otherwise self-taught.

Both Ron and Don attended the Eston Full Gospel Bible Institute (Eston, SK), graduating in 1958. Ron became an ordained minister in June 1959. Living in Punnichy and then Fort Qu'Appelle, SK, Ron served the Apostolic Church until his death, conducting services, bible studies, and tent meetings for First Nations people. He married Barbara Clements on 8 June 1963; she served as his lifelong helper and chauffeur. Living in a trailer pulled behind their van, setting up their tent and chairs, the Hoopers went to First Nations north of Punnichy and along the Qu'Appelle Valley area, north to Red

Earth and Shoal Lake First Nations and east into Manitoba.

In 1973, Ron's intense interest in butterflies led to his 216-page publication, *Butterflies of Saskatchewan: A Field Guide*, with photographs by Ron Long and drawings by Fred Lahrman and Jack Pickering (Regina: Museum of Natural History). Ron produced an 18-part series in the *Blue Jay* entitled "A check-list of the moths of Saskatchewan" and wrote the second supplement to Callin's *Birds of the Qu'Appelle Valley* (*Blue Jay* 60:64-74, June 2002). Meanwhile, his brother Donald, who took over management of the family farm, compiled *Birds of East-Central Saskatchewan: Kelvington to Kelsey Trail* (Saskatchewan Natural History Society Special Publication 18) in 1992.

Ron was a lifetime all-round naturalist and long-term president of the new Fort Qu'Appelle Natural History Society, founded in 1984 by Lorne Rowell. The next year, Ron Hooper began his 21 years of presidency, interrupted only for four years, 1995–1998, when Phyllis Bordass served as president. Ron convened the Fort Qu'Appelle Christmas Bird Count each year, and made important bird observations. His greatest contributions to science, however, were his studies of the butterflies, moths, and beetles of Saskatchewan. He collected the first Mexican sulphur (*Erema mexicana*) for Saskatchewan and a new ground beetle, *Bembidion lanciphotoides*. Having established the Royal Saskatchewan Museum's entomological collection, Ron remained its curator for 46 years; after reaching mandatory retirement age in 1996, he continued working, sometimes on contract and sometimes as a volunteer. The Entomological Society of Canada awarded him the Norman J. Criddle award for contributions to entomology made by an amateur in 1983. In 1992, Ron was

made a Fellow of the Saskatchewan Natural History Society.

Ron's love for insects began at an early age. On one occasion, both Ron and Don were in trouble with their father, because he had found his tractor battery dead, and had to pull the tractor with horses to get it started. Ron and Don had been "sugaring for moths" all night, attracting the insects to a white sheet baited with syrup, in front of their father's tractor headlights. The normally patient and proud father was less than enthusiastic about such use of his tractor.

Keith Roney accompanied Ron Hooper on many entomology field trips, sleeping either in tents or in the back of a van. Keith always cooked for three people, because the slim and active Ron ate enough for two, yet never gained a pound. After breakfast, a can of Tiny Teddy's green peas would sustain Ron until a late supper. His energy expenditure was best exemplified when his two companions struggled through a barbed-wire fence near Avonlea. Ron took a running jump and cleared the fence – impressive, since he was wearing heavy rubber boots at the time!

Once, while attracting and collecting insects by smearing a mixture of very ripe bananas, brown sugar and yeast on tree trunks, the moths were only part of what was collected. A black bear was equally attracted and tried to enter the tent. The remainder of the night they slept less deeply, even with a rifle at their side. Another time, when the tent zipper was broken and mosquitoes kept the other occupants awake, Ron slept peacefully with a butterfly net over his head.

Ron gave collecting specimens high priority, even on his honeymoon. Following their wedding, Ron and Barbara honeymooned in the Cypress Hills,

where Ron collected at least four new butterfly species for Saskatchewan and two for Alberta. Once, on a flight to Lake Athabasca, refueling at La Ronge, Ron sneaked quickly along the runway, collecting with his foldable butterfly net.

Ron died in Tijuana, Mexico, on 2 December 2010 while seeking alternative cancer treatment. His wake and funeral were both held in the Standing Buffalo First Nation school gymnasium on the reserve near Fort Qu'Appelle. Twenty-five members of his aboriginal congregation followed the hearse on the long trip

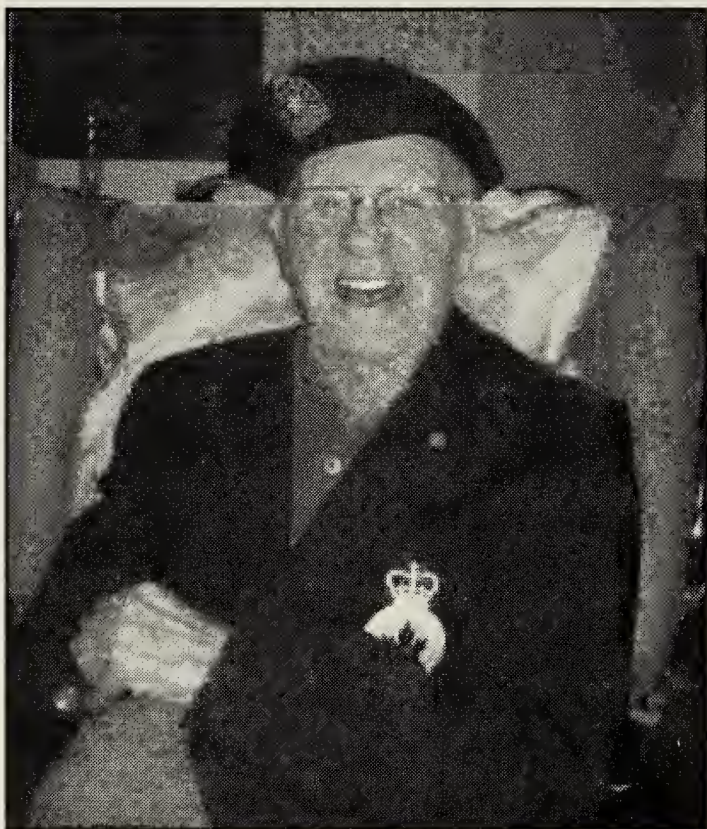
north to interment and graveside service at St. Andrew's Cemetery, north of Carragana, where he was interred near his twin brother, Dón, who had died on 19 June 1993. Ron is survived by his wife, Barbara, son John and daughter Esther, all at Fort Qu'Appelle, and his son David (Vicki) Hooper and their family Alicia and Jesse in the United Arab Emirates.

Rev. Ron Hooper was Saskatchewan's last self-taught, all-round naturalist, a special and unique individual. His immense knowledge will be greatly missed.

IN MEMORIAM: JAMES A. SLIMMON, 1916–2010

C. Stuart Houston

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Jim Slimmon was born at Oak Lake, Manitoba, on 5 April 1916, the third of five children born to Gladstone and Maude Slimmon. At Neepawa High School, he was president of the student body. Jim enrolled in the Royal Canadian Air Force at the onset of World War II, was shot

down over occupied Europe, and spent a year as a prisoner of war. After discharge, he was employed by Manitoba Co-op Wholesale in Winnipeg and married Vivian Fenson on 22 December 1945. When Federated Co-operatives Limited was formed in 1955, Jim was transferred to Saskatoon. He chose not to accept offered promotions in order to continue community service, and retired from Federated in 1981.

In the Saskatoon Natural History Society (now the Saskatoon Nature Society), Jim was a Director in 1963, Vice-President in 1964, President in 1965 and 1966, and Past-President in 1967. He returned to the board and served from 1986 to 1990.

At the provincial level, Jim was recording secretary of the Saskatchewan Natural History Society (SNHS) from 1964 to 1965; chair of the constitution committee (1966–1968); *Newsletter* editor (1965–

1971); treasurer (1982–1984), and chair of the Finance Committee (1984–1989). In *The Isabel Priestly Legacy* (1996), Margaret Belcher stated, “No one on the Board was in a better position to understand the workings of the society. Perhaps no single member of the board was more valuable to the Society over the years. Slimmon’s Finance Committee with its continuing preoccupations was more active than the Executive Committee” (footnote 106, p. 274). Belcher also wrote that “Slimmon’s business acumen and long experience of the Society’s affairs were of vital importance in dealing with the increasingly complex business of the Society. Under Slimmon’s direction, the finance committee became truly accountable to the Board, presenting a financial report at each meeting” (p. 217). Slimmon “continued to be the Society’s anchor in the sometimes turbulent waters of its operations. In 1988–89, he and his committee pursued the task they had earlier set of formulating policies to guide these operations. As these new guidelines were approved by the Board, they became part of the Society’s formal policy manual”(p. 233).

Jim obtained a bird banding subpermit in 1962 and a master banding permit in 1981; specializing in blackbirds, he placed bands on 4357 yellow-headed and 2738 red-winged blackbirds. With the realization that there were major gaps in the knowledge of breeding birds within the Saskatoon Bird Area, Jim obtained a federal bird egg collecting permit in 1963. That year, he added 14 new species to the area list of breeding species. Jim was in the second group named as Fellows of the SNHS in 1988, along with Fred Bard, Bob Nero, and Jim and Shirley Jowsey.

Apart from his birding activity, Jim served tirelessly in his community and province. He was a district commissioner and member of the national training team in Boy Scouts Canada. He served as president or chair of the Community Health Service Association, Saskatchewan Health Care Association, Community Health Unit Board, Saskatoon Area Ambulance District, Saskatoon Animal Control Committee, and Vice-Chair of the City Hospital Board of Governors. He received the Meewasin Conservation Award in 1989. In 2005, he received a Centennial Medal for his lifetime of community service. Slimmon Road and its offshoot, Slimmon Place, have been named in his honour. They are immediately adjacent to the preserved waterbodies in southeast Saskatoon, appropriately saved following the Saskatoon Nature Society’s representations to the city.

Jim suffered a heart attack 9 November 1996; anti-clotting medication was given, followed by a massive cerebral hemorrhage the next day. He spent the remainder of his life in the care of the Saskatoon Veterans Home and later, Sherbrooke Veterans Village. He donated his extensive bird’s egg collection to the Biology Museum at the University of Saskatchewan. Jim is survived by his wife of 65 years, sons Doug and John, and daughters Judy and Kim, six grandchildren, their spouses, and five great-grandchildren.

Acknowledgements

Jim’s widow, Vivian, provided additional details concerning his community service. J. Frank Roy improved the memorial.

MYSTERY PHOTO

ANSWER TO THE DECEMBER 2010 MYSTERY PHOTO



Harvey Schmidt had posed the question: How many birds can you count?

There are 16 willow ptarmigan dozing in the snow (all of them numbered) and one common redpoll perched in the branches above them (arrow). Kudos to anyone who found so much as one bird!



Charley Bird took a crack at the as yet unsolved September 2010 mystery (submitted by Joseph Kotlar). He writes, "Just received the latest Blue Jay and noticed that the above photo still lacks an identification. The problem is that we only have a side view. It would have been especially helpful if we had both a top and a bottom view. Lacking these, I think that the photo is probably of the perennial bracket fungus *Ganoderma applanatum*, variously called the artist's bracket or artist's conk. It has pores on the underside, rather than gills. There is a good description, with images at http://en.wikipedia.org/wiki/Ganoderma_applanatum."

MARCH 2011 MYSTERY PHOTO



Joanne Marchand submitted this photo (see outside back cover for a remarkable colour version).

One can only ask, what the bloody heck is it??

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Yellow-billed cuckoo (Coccyzus americanus) observed in Saskatoon, SK, in September 2010. See note by C. Salisbury on p. 37 . *Craig D.C. Salisbury*



Figure 3. Morphological variants among common moonworts (Botrychium lunaria). Left: Basal pinnae have been replaced by additional sporophores. Middle: A fertile basal pinna. Right: Two trophophores instead of one. For more on unusual morphology among common moonworts, see article by R. Staniforth on p. 34.

Richard J. Staniforth



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